Safety Data Sheet

Section 1: Identification of the Material and Supplier

Product Name: Westinghouse 4-Stroke Small Engine Oil
Product Code: 08Q
Product Use: Engine Oil
Supplier: Chongqing Juzhnscie Technology Development Co. Ltd.
Room 14-1 Block no. 200 Keyuanno 1Road Jiu Longpo District Chongqing
Phone: +86-023-689-6858
Email: CQJZKY@163.com
Emergency Phone: +44 (0) 344-892-0111
Chemical Nature: Petroleum-derived severely refined minerl-base product, in which the Polycyclic aromatic hydrocarbons (PCA or PAH) content, measured by IP 346 is less than 3%
Creation Date: August 15, 2018

Section 2: Hazards Identification

Classification of the Substance or Mixture: EC No. 1272/2008

- **GHS08**
  - Carc. 1B H350 - may cause cancer
- **GHS07**
  - Eye Irrit. 2 H319 - Causes serious eye irritation
- **Aquatic Chronic**
  - 3 H412 - Harmful to aquatic life with long-lasting effects

Labeling: The product has to be labelled due to the calculation procedure of EC No. 1272/2008, and extended by company and literature data
Signal Word: Danger
Trade Name: Westinghouse 4-Stroke Small Engine Oil
Hazard-Determining Components of Labeling: Petroleum
Hazard Statements:

- H319 - Causes serious eye irritation
- H350 - May cause cancer
- H412 - Harmful to aquatic life with long-lasting effects

Precautionary Statements:

- P273 - Avoid release into the environment
- P280 - Wear protective gloves, clothing, eye protection, face protection
- P305 - If in eyes, rinse cautiously with water for several minutes. Remove contacts lenses if present and easy to do. Continue rinsing.
- P308 - If exposed or concerned, get medical advice
- P405 - lock up when storing
- P501 - Dispose of contents/container in accordance with local/regional/national/international regulations

Additional Information: Restricted to professional users

Other Hazards: Results of PBT and vPvB assesment

PBT: not applicable

vPvB: not applicable

Section 3: Composition/Information on Ingredients

Composition

CAS: 8002-05-09 EINECS: 232-298-5 Index No. 649-049-00-5	Petroleum Carc. 1B, H350	96.699%
CAS: 26264-06-2 EINECS: 247-557-8	Calcium dodecylbenzenesulphonate Eye Cam. 1, H318; Skin Irrit. 2, H315	2.5%
CAS: 128-37-0 EINECS: 204-881-4	2,6-di-tert-butyl-p-cresol Aquatic Acute 1, H400; Aquatic Chronic 1,H410	0.8%
CAS: 63148-62-9	Dimethyl siloxane	0.001%

Section 4: First Aid Measures

4.1 - Description of First Aid Measures

- After Inhalation: supply fresh air; consult doctor in case of complaints
- After Skin Contact: Generally the product does not irritate the skin
- After Eye Contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- After Swallowing: If symptoms persist, consult a doctor

4.2 - Most Important Symptoms and Effects, both Acute and Delayed

- No further relevant information available

4.3 - Indication of any Immediate Medical Attention and Special Attention Needed

- No further relevant information available

Section 5: Fire-Fighting Measures

5.1 - Extinguishing Media

- Suitable extinguishing agents: Use fire extinguishing methods suitable to surrounding conditions

5.2 - Special Hazards Arising from the Substance or Mixture

- No further relevant information available

5.3 - Advice for Firefighters

- Protective equipment: no special measures required

Section 6: Accidental Release Measures

6.1 - Personal Precautions, Protective Equipment and Emergency Procedures

- Not required

6.2 - Environmental Precautions

- Inform respective authorities in case of seepage into water course or sewage system.
- Do not allow to enter sewers, surface, or ground water.

6.3 - Methods and Material for Containment and Cleaning Up

- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Dispose of contaminated material as waste according to section 13.
- Ensure adequate ventilation

6.4 - Reference to Other Sections

- See Section 7 for information on safe handling
- See Section 8 for information on personal protection equipment
- See Section 13 for disposal information

Section 7: Handling and Storage

7.1 - Precautions for Safe Handling

- Ensure good ventilation/exhaustion at the workplace
- For the general occupational hygienic measures refer to Section 8

- Information about fire and explosion protection: No special measures required

7.2 - Conditions for Safe Storage, Including any Incompatibilities

- Requirements to be met by storerooms and receptacles: No special requirements
- Information about storage in one common storage facility: not required
- Further information about storage conditions: keep container tightly sealed

7.3 - Specific end Use(s)

- No further relevant information available

Section 8: Exposure Controls/Personal Protection

8.1 - Control Parameters

- **Regulatory Information**
  WEL (Great Britain) : EH40/2011
  AGW (Germany): TRGS 900
  VME (France) ED 984, 10.2016
- **DNELs:** not available
- **PNECs:** not available
- **Additional Information**
  The lists alid during the making were used as basis
- **Ingredients with Limit Values that Require Monitoring at the Workplace**
  128-37-0 2,6-di-tert-butyl-p-cresol (0.8%)
  - WEL (Great Britain): Long-term value = 10 mg/m^3
  - AGW (Germany): Long-term value = mg/m^3 4(II); DFG, Y, 11
  - VMW (France): Long-term value = mg/m^3

8.2 - Exposure Controls

Based on the composition shown in Section 3, the following measures are Suggested for occupational safety measure.

- **Appropriate Engineering Controls:**
  - Keep away from foodstuffs, beverages, and feed
  - Immediately remove all soiled and contaminated clothing
  - Wash hands before breaks and at the end of work
  - Store protective clothing separately
  - Avoid contact with the eyes
  - Avoid contact with skin
  - See Section 7 for information about technical facilities design
- **Personal Protective Equipment:**
  - Respiratory Protection - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use self-contained respiratory protective device
  - Protection of Hands - protective gloves. The glove material has to be impermeable and resistant to the product/the substance/the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion, and the degradation

- Material of Gloves - The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- Penetration Time of Glove Material - The exact break through time has to be determined by the manufacturer of the protective loves and has to be observed
- Eye Protection - tightly sealed goggles

- **Environmental Exposure Controls:**
  Control measures must be made in accordance with community environmental protection legislation

Section 9: Physical and Chemical Properties

9.1 - Information on Basic Physical and Chemical Properties

Initial Boiling Point	Not Available
Boiling Range	Not Available
Flash Point	220 ^{0}C
Flammability as a Gas	Not Available
Flammability as a Solid	Not Available
Auto-ignition Temperature	Not Available
Decomposition Temperature	Not Available
Self-igniting	Product is not self-igniting
Explosive Properties	Product does not present an explosion hazard
Lower Explosion Limit	Not Available
Upper Explosion Limit	Not Available
Vapour Pressure	Not Available
Kinematic Viscosity	Not Available
Dynamic Viscosity	Not Available

Partition Coefficient: n-octanol/water	Not Available
Solubility in Miscibility with Water	Not Available
Density	0.865 g/cm^3
Vapour Density	Not Available
Relative Density	Not Available
Evaporation	Not Available

9.2 - Other Information: No further relevant information available.

Section 10: Stability and Reactivity

10.1 - Reactivity: Data not available
10.2 - Chemical Stability: Data not available
10.3 - Possibility of Hazardous Reactions: No dangerous reactions known
10.4 - Conditions to Avoid: No further relevant information available
10.5 - Incompatible Materials: Nor further relevant information available
10.6 - Hazardous Decomposition Products: No dangerous decomposition products Known

Section 11: Toxicological Information

11.1 - Information on Toxicological Effects

- **Acute Toxicity:** Based on available data, the classification criteria are not met
- **LD/LC50 Values Relevant for Classification:** Not available
- **Skin Corrosion/Irritation:** Based on available data, the classification criteria are not met
- **Serious Eye Damage/Irritation:** Causes serious eye irritation
- **Respiratory or Skin Sensitization:** Based on the available data, the classification criteria are not met
- **Germ Cell Mutagenicity:** Based on available date, the classification criteria are not met
- **Carcinogenicity:** May cause cancer
- **Reproductive Toxicity:** Based on available data, the classification criteria are not met
- **STOT-Single Exposure:** Based on available data, the classification criteria are

not met

- **STOT-Repeated Exposure:** Based on available data, the classification criteria are not met
- **Aspiration Hazard:** Based on available data, the classification criteria are not met

Section 12: Ecological Information

12.1 - Aquatic Toxicity: No further relevant information available
12.2 - Persistence and Degradability: No further relevant information available
12.3 - Bioaccumulative Potential: No further relevant information available
12.4 - Mobility in Soil: No further relevant information available
12.5 Results of PBT and vPvB Assessment:
PBT: Not applicable
vPvB: Not applicable
12.6 - Other Adverse Effects: No further relevant information available
12.7 - Additional Ecological Information:
General Notes: Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water. Do not allow product to reach ground water, water course, or sewage system. Danger to drinking water if even small quantities leak into the ground. Harmful to aquatic organisms.

Section 13: Disposal Considerations

13. 1 - Waste Treatment Methods:

- **Recommendation:**Must not be disposed together with regular household garbage. Do not allow product to reach sewage system.
- **Uncleaned Packaging Recommendation:** Disposal must be made according to official regulations.

Section 14: Transport Information

14.1 - UN Number: ADR/RID/ADN, IMDG, IATA - Not applicable
14.2 - UN Proper Shipping Name: ADR/RID/ADN, IMDG, IATA - Not applicable
14.3 - Transport Hazard Class: ADR/RID/ADN, IMDG, IATA - Not applicable
Transport Hazard Label: ADR/RID/ADN, IMDG, IATA - Not applicable
14.4 - Packing Group: ADR/RID/ADN, IMDG, IATA - Not applicable
14.5 - Environmental Hazards: not a marine pollutant
14.6 - Special Precautions for user: Danger code (Kemler) - not applicable

14.7 - Transport in Bulk According to Annex II of Marpol and the IBC Code: not applicable

Section 15: Regulatory Information

15.1 - Safety, Health, and Environmental Regulations/Legislation Specific for the Substance or Mixture

- **MAK (German Maximum Workplace Concentration:** 128-37-0
  2,6-di-tert-butyl-p-cresol
- **Directive 2012/18/EU**
- **Named Dangerous Substances:** ANNEX I None of the ingredients is listed
- **Seveso Category:** Not applicable
- **Qualifying Quantity (Tonnes) for the Application of Lower-Tier Requirements:** Not applicable
- **Qualifying Quantity (Tonnes) for the Application of Upper-Tier Requirements:** Not applicable
- **Additional Classification According to Decree on Hazardous Materials, Annex II:** Carcinogenic hazardous material group III (dangerous)
- **Information about Limitation of Use:** Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.
- **Water Hazard Class:** Water hazard class 2 (self-assessment): hazardous for water
- **SVHC Candidate List of REACH Regulation Annex XIV Authorisation (27/6/2018):** None of the ingredients is listed
- **REACH REgulation Annex XVII Restriction (18/4/2018):** See section 16 for information about restriction of use (8002-05-9 Petroleum)
- **REACH Regulation Annex XIV Authorisation List (13/6/2017):** None of the ingredients is listed

15.2 - Chemical Safety Assessment: A Chemical Safety Assessment has not been carried out

Section 16: Other Information

Recommended Restriction of Use:

REACH Annex XVII Restricted - 28:

28. Substances which appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 classified as carcinogen category 1A or 1B (Table 3.1) or carcinogen category 1 or 2 (Table 3.2) and listed as follows:

- Carcinogen category 1A (Table 3.1)/carcinogen category 1 (Table 3.2) Listed in Appendix 1
- Carcinogen category 1B (Table 3.1)/carcinogen category 2 (Table 3.2) listed in Appendix 2

Petroleum (CAS: 8002-05-9)

Without prejudice to the other parts of this Annex the following shall apply to entries 28 to 30:

1. Shall not be placed on the market or used:
    a. As substances
    b. As constituents of other substances, or,
    c. In mixtures
    d. For supply to the general public when the individual concentration in the substance or mixture is equal to or greater than either the relevant specific concentration limit specified in Part 3 of Annex VI to Regulation EC No 1272/2008, or the relevant concentration specified in Directive 1999/45/EC where no specific concentration limit is set out in Part 3 of Annex VI to Regulation EC No 1272/2008

Without prejudice to the implementation of other Community provisions relating to the classification, packaging and labelling of substances and mixtures, suppliers shall ensure before the placing on the market that the packaging of such substances and mixtures is marked visibly legibly, and indelibly as follows: Restricted to professional users.

2. By way of derogation, paragraph 1 shall not apply to:
    a. Medicinal or veterinary product as defined by Directive 2001/82/EC and Directive 100`/83/EC
    b. Cosmetic products as defined by Directive 76/768/EEC
    c. The following fuels and oil products:
        i. Motor fuels which are covered by Directive 98/70/EC
        ii. Mineral oil products intended for use as fuel in mobile or fixed combustion plants
        iii. Fuels sold in closed systems (e.g. liquid gas bottles)
        iv. Artists' paints covered by Directive 1999/45/EC
        v. The substances listed in Appendix 11, column 1, for the applications or uses listed in Appendix 11, column 2, where a date is specified in column 2 of Appendix 11, the derogation shall apply until the said date.

Relevant Hazard Statements:

- H315 - Causes skin irritation
- H318 - Causes serious eye damage
- H350 - May cause cancer
- H400 - Very toxic to aquatic life
- H410 - Very toxic to aquatic life with long-lasting effects

Classification According to Regulation EC No. 1272/2008:

- Serious eye damage/eye irritation
- Carcinogenicity
- Hazardous to the aquatic environment - long-term (chronic) aquatic hazard
- The classification of the mixture is generally based on the calculation method using substance data according to Regulation EC No. 1272/2008

The contents and format of this SDS are in accordance with Regulation EC No. 1907/2006, 1272/2008, and Regulation EU No. 2015/830

Disclaimer of Liability:
The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reason, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

Abbreviations and Acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for dangerous goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
PBT: Persistent, Bioaccumulative and Toxic

vPvB: Very persistent and very Bioaccumulative
Skin Irrit. 2: Skin corrosion/irritation - Category 2
Eye Dam. 1: Serious eye damage/eye irritation - Category 1
Eye Irrit. 2: Serious eye damage/eye irritation - Category 2
Carc. 1B: Carcinogenicity - Category 1B
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard - Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard - Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term hazard - Category 3

END OF DOCUMENT

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-FM-14
Nominal Voltage: 12V
Nominal capacity: 14Ah
Nominal Power: 168Wh
Weight: 3.9KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.
Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-FM-14
Nominal Voltage: 12V
Nominal capacity: 14Ah
Nominal Power: 168Wh
Weight: 3.9KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.
Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

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Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

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Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

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Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

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Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

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Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

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Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

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Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product Identifier

Name of Product: Lead Acid (Non-Spillable) Battery

1.2 Other means of identification

Product Models: 6-MF-7A
Nominal Voltage: 12V
Nominal capacity: 6Ah
Nominal Power: 72Wh
Weight: 2.1KG

1.3 Recommended use of the chemical and restriction on use

Recommended Use: Lead Acid (Non-Spillable) Battery
Restriction on Use: No information available

1.4 Information Of Supplier:

Company Name: SICHUAN LIYANG INDUSTRY CO.LTD
Address: YANHUASI INDUSTRY ZONE, ANJU DIST. SUINING, SICHUAN P.R. CHINA
Zip code: 629000
Contact person: Chun Dongmei
Tel: +86-023-62571745
E-mail: Battery928@126.com

1.5 Emergency Telephone

+86-17708311919

2. Hazard(s) Identification

2.1 Classification

This product is an article which is a sealed battery and as such does not require an SDS per the OSHA hazard communication standards unless ruptured. The hazards indicated are for a ruptured battery.

Acute toxicity – Oral	Category 3
Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1
Specific target organ toxicity (repeated exposure)	Category 2
Germ cell mutagenicity	Category 1
Reproductive toxicity	Category 1A

2.2 Label elements

2.2.1 Signal Word Danger

2.2.2 Hazard Statements

Cause severe skin burns and eye damage
Harmful if swallowed or inhaled.

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May damage fertility or the unborn child.
May cause damage to the reproductive system, the blood, the brain and the endocrine system through prolonged or repeated exposure. Route of exposure: Oral, Inhalation.
Toxic if swallowed or inhaled.

2.2.3 Symbol



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as solid. Intended use of the product should not result in exposure to the chemical substance, This is a battery. In case of rupture: the above hazards exist.

2.3 Precautionary Statements

2.3.1 Precautionary Statements – Prevention

Do not breath dust/fume/gas/mist/vapors/spray.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use personal protective equipment as required.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash face, hands and any exposed skin thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Keep away from flames and hot surface –no smoking.

2.3 .2Precautionary Statements – Response

If exposed or connected: Get medical advice/attention. Specific treatment (see supplemental first aid/instruction on this label).

Skin
If on skin: wash with plenty of soap and water. Take off contaminated clothing and water before reuse, if skin irritation or rash occurs: get medical advice/attention if feel unwell.

Eye
If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do, Continue rinsing. Call a poison center or doctor/physician.

Inhalation
If inhalation: if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor/physician.

Ingestion
If swallowed: rinse mouth, do not induce vomiting ,Call a poison center or doctor/physician if feel unwell.

2.3.3 Precautionary Statements – Storage

Store locked up

2.3.4 Precautionary Statements – Disposal

Dispose of contents/container in accordance with local/ regional/ national/ international

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regulations.

2.4 Hazards not otherwise classified (HNOC)

Not applicable

2.5 Unknown Toxicity

9% of the mixture consists of ingredient(s) of unknown toxicity.

2.6 Other information

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

2.7 Interactions with other chemicals

Use of alcoholic beverages may enhance toxic effect.

3. Composition/ Information on Ingredients

Chemical Name	Molecular formula	CAS No.	Weigh%
Sulfuric acid	H_2SO_4	7664-93-9	30-50
Polypropylene	C_3H_6	9003-07-0	8-10
Lead	Pb	7439-92-1	60-90
Tin	Sn	7440-31-5	0.1-0.2
Antimony	Sb	7440-36-0	0.1-0.2
Glass, oxide	SiO_2	65997-17-3	1-3
Copper	Cu	7440-50-8	0.00104
Bismuth	Bi	7440-69-9	0.00096
Iron	Fe	7439-89-6	0.0013

4. First Aid Measures

4.1 General Advice

First aid is Applicable only in the case of cell rupture.

4.1.1 Eye contact

If symptoms persist, call a physician. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area.

4.1.2 Skin Contact

Wash off immediately with plenty of water and soap for at least 15 minutes. In the case of skin irritation or allergic reaction see a physician. May cause an allergic skin reaction.

4.1.3 Inhalation of Vented Gas

Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the

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substances; give artificial respiration with the aid of a pocket mask equipped with a one-way value or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur.

4.1.4 Ingestion

Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately.

4.1.5 Self-protection of the first aider

Ensure that medical personnel are aware of the material(s) involved. Take precaution to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Use personnel protective equipment as required. Wear personnel protective clothing (see section8).

4.2 Most important symptoms and effects, both acute and delayed

Burning sensation, Itching. Rashes. Hives,Coughing.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician

Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization of susceptible persons. Treat symptomatically.

5. Fire –Fighting Measures

5.1 Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. For example, dry powder or dry sand.

5.2 Unsuitable Extinguishing Media

CAUTION: DO NOT use water.

5.3 Specific Hazards Arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. May cause sensitization by inhalation and skin contact. Product is or contains a sensitizer.

Hazardous Combustion products

Sulfur oxides

5.4 Explosion Data

Sensitivity to Mechanical Impact :No.

Sensitivity to Static Discharge: No.

5.5 Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/IOSH

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(approved or equivalent) and full protective gear. Move containers from fire area if you can do it without risk.

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

6.3 Methods for containment

Prevent further leakage or spillage if safe to do so. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

6.4 Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

7.1 Precaution for safe handling

In case of rupture, use personal protection equipment. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

7.2 Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

Incompatible products

Strong acids. Strong oxidizing agent. Strong bases. Organic matter.

8. Exposure Controls/Personal Protection

8.1 Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m^3	TWA: 1 mg/m^3	IDLH: 15 mg/m^3 TWA: 1 mg/m^3
Lead 7439-92-1	TWA: 0.05mg/m^3	TWA: 0.05 mg/m^3	IDLH:100 mg/m^3(as Pb) TWA: 0.05mg/m^3
Tin 7440-31-5	TWA：2 mg/m^3	TWA: 2 mg/m^3	IDLH:100 mg/m^3(as Sn)

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			TWA：2 mg/m³
Antimony 7440-36-0	TWA: 0.5mg/m³	TWA：0.5mg/m³	IDLH:50 mg/m³((as Sb) TWA:0.5mg/m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists-Threshold Limit Value
OSHA PEL：Occupational Safety and Health Administration-Permissible Exposure Limits
NIOSH IDLH Immediately Dangerous to Life or Health

Other Exposure Guidelines:
Vacated limits revoked by the court of Appeals decision in AFL-CLO v. OSHA, 965F, 2d 962(11th Cir., 1992) See section 15 for national exposure control parameters.

8.2 Appropriate engineering controls

Engineering Measures:
Showers、 Eyewash stations、Ventilation systems

8.3 Individual protection measures, such as personal protective equipment

Respiratory protection : No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Eye /face protection: if splashes are likely to occur: Wear safety glasses with side shields(or goggles). None required for consumer use.

Skin protection: Wear protective gloves and protective clothing. Long sleeved clothing. Imperious gloves.

Hygiene Measure: Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. For environmental protection, remove and wash all contaminated protective equipment before re-use. No information available.

9. Physical and Chemical Properties

Physical State: Solid

Color: Black

Odor: Odorless

Odor Threshold: No information available

pH: No data available

Melting/freezing point: No data available

Boiling point/boiling range: No data available

Flash Point: No data available

Evaporation Rate: No data available

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Flammability (Solid, gas): No data available

Flammability Limit in Air:

Upper flammability limit: No data available

Lower flammability limit: No data available

Vapor pressure: No data available

Vapor density: No data available

Specific Gravity: No data available

Solubility: Insoluble in water

Partition coefficient:n-octanol/water: No data available

Autoignition temperature: No data available

Decomposition temperature: No data available

Kinematic viscosity: No data available

Dynamic viscosity: No data available

10. Stability and Reactivity

Reactivity:
No data available

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Hazardous Polymerization:
Hazardous polymerization dose not occur.

Conditions to avoid:
Do not subject battery to mechanical shock. Keep away from open flames, high temperature.

Incompatible materials:
Strong acids, Strong oxidizing agents. Strong bases. Metal powders. Halogens. Cyanides.

Hazardous decomposition products:
Sulfur oxides

11. Toxicological Information

11.1 Information on likely routes of exposure

Product information:
Product does not present an acute toxicity hazard based on known or supplied information. In

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case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation(base on components). Inhalation of corrosion fumes/gases may cause coughing, choking, headache, dizziness and weakness for several hour. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure and increased heart rate. Inhaled corrosion substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract.

Eye Contact:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Corrosion to the eyes and may cause severe damage including blindness. Cause serious eye damage. May cause irreversible damage to eyes.

Skin Contact:
Specific test data for the substance or mixture is not available. Corrosion (based on components). Cause burns. Toxic in contact with skin. May be absorbed through the skin in harmful amounts.

Ingestion:
Specific test data for the substance or mixture is not available. Cause burns. (based on components). Ingestion cause burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. May be harmful if swallowed.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 320 mg/m^3 (Rat) 2 h
Lead 7439-92-1	= 1000 mg/kg (Rat)	-	-
Antimony 7440-36-0	= 100 mg/kg (Rat)	-	

11.2 Information on toxicological effects

Symptoms:
Erythema (skin redness). May cause redness and tearing of eyes. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing. Coughing and/or wheezing.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization: May cause sensitization of susceptible person, May cause sensitization by skin contact. May cause sensitization by inhalation.

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Mutagenic Effects: No information available.

Carcinogenicity: the table below whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Sulfuric acid 7664-93-9	A2	Group 1	Known	X
Lead 7439-92-1		Group 2A	Reasonably Anticipated	X
Antimony 7440-36-0			Reasonably Anticipated	X

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 - Known Human Carcinogen
A3- Animal Carcinogen
IARC (International Agency for research on Cancer)
1 - Carcinogenic to Humans
2A - Probably Carcinogenic to Humans Group
2B- Possibly Carcinogenic to humans
NTP (National Toxicology Program) Reasonably Anticipated- reasonably anticipated to be a human Carcinogenic.
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational safety and Health Administration of the US Department of Labor)
X-Present

Reproductive Toxicity: Contains a known or suspected reproductive toxin.

STOT- single exposure: No information available.

STOT- repeated exposure: Cause damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE)

Chronic Toxicity: Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contain a known or suspected carcinogen. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system. May cause adverse liver effects.

Target Organ Effects: Respiratory system. Eyes. Skin. Gastrointestinal tract(GI). Blood. Central Nervous System(CNS). Kidney. Liver. Lungs. Nasal cavities.

Aspiration Hazard: No information available.

11.4 Numerical measures of toxicity product information

The following values are calculated based on chapter 3.1 of the GHS document.
ATE mix(oral): 1600 mg/kg
ATE mix(dermal): 1540 mg/kg (ATE)
ATEmix (inhalation) : 160 mg/l

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12. Ecological Information

Ecotoxicity : Very toxic to aquatic life with long lasting effects.

Persistence and Degradability: No information available

Bioaccumulation: No information available

Other adverse effects: No information available

13. Disposal Considerations

13.1Waste treatment methods

Disposal methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Should not be released into the environment.

Contaminated Packaging:

Dispose of in accordance with federal, state and local regulations.

California Hazardous Waste Codes 141
This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Sulfuric acid 7664-93-9	Toxic Corrosive
Lead 7439-92-1	Toxic
Antimony 7440-36-0	Toxic

14. Transportation Information

According to IATA DGR 57th Edition for transportation, assemble articles strictly according to Hazardous Goods Transport Rules of Railway Station , The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don’ t stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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UN-Number DOT, IMDG, IATA: UN2800

UN proper shipping name DOT, IMDG, IATA: Batteries, wet, non-spillable

Transport hazard class DOT, IMDG, IATA 8

Packing group DOT, IMDG, IATA: Ⅱ
TDG: Not regulated
MEX: Not regulated
ICAO: Not regulated
Ems No.: F-A,S-B
RID: Not regulated
ADR: Not regulated
AND: Not regulated

15. Regulatory information

15.1International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.
TSCA – United State Toxic Substance Control Act Section 8(b) Inventory
DSL/NDSL – Canadian Domestic Substance List/Non-Domestic Substance List

15.2 US Federal Regulations

SARA 313: Section 313 of Title III of the superfund Amendments and Reauthorization Act of 1986(SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	Weight (%)	SARA313-Threshold values(%)
Sulfuric acid 7664-93-9	30-50	0.1
Lead 7439-92-1	60-90	0.1
Antimony 7440-36-0	0.1-0.2	0.1

15.3 SARA 311/312Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

15.4 CWA (Clean Water Act)

This product contain the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Chemical Name	CWA -Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sulfuric acid 7664-93-9		X	X	X
Lead 7439-92-1		X	X	X
Antimony 7440-36-0		X	X	X

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15.5CERCLA

This material, as supplied, contain one or more substances regulate as a hazardous under the comprehensive Environmental Response Compensation and Liability Act(CERCLA) (40 CER 302)

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sulfuric acid 7664-93-9		X	

15.6 US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical Name	**California Proposition 65**
Sulfuric acid 7664-93-9	Carcinogen
Lead 7439-92-1	Carcinogen

U.S State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	IIIinois
Sulfuric acid 7664-93-9	×	×	×	×	×
Lead 7439-92-1	×	×	×	×	×
Tin 7440-31-5	×	×	×		
Antimony 7440-36-0	×	×	×	×	×

15.7International Regulations

Canada
WHMIS Hazard Class
Non-controlled

16. Other Information

Disclaimer:

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used material used in combination with any other materials or in any process, unless specified in the test

Prepared By: SICHUAN LIYANG INDUSTRY CO.LTD

Revision Date: December-13-2016

--- End of SDS ---

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