

Material Safety Data Sheet

Issuing Date 28-Feb-2011

Revision Date 28-Feb-2011

Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name Valve-Regulated sealed lead acid battery

Recommended Use Lead acid battery. Automotive Kit.

Supplier Address

HUANYU POWER
SOURCE(SHENZHEN) CO.,LTD
Xintang Industrial
Zone,Baishixia,Fuyong Town,Bao'an
District of Shenzhen, ShenZhen,
Guangdong, 518103
CN
Phone:86 0755 27370589
Fax:86 0755 27370594
Contact:???
Contact Phone:86 0755 27370590
Emergency Phone: 86 13923840373

Company Emergency Phone Number 86 13923840373

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

In case of rupture:
Harmful by inhalation, in contact with skin and if swallowed
Corrosive
The product causes burns of eyes, skin and mucous membranes
May produce an allergic reaction

Appearance Black

Physical State Solid, Solid containing liquid.

Odor No information available

OSHA Regulatory Status

This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery. While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this MSDS contains valuable information critical to the safe handling and proper use of the product. This MSDS should be retained and available for employees and other users of this product.

Potential Health Effects

Principle Routes of Exposure

Eye contact. Skin contact.

Acute Toxicity

Eyes

Causes burns. Corrosive to the eyes and may cause severe damage including blindness. Risk of serious damage to eyes.

Skin

Causes burns.

Inhalation

Harmful by inhalation.

| | |
|--|--|
| Ingestion | Harmful if swallowed. Ingestion causes burns of the upper digestive and respiratory tract. Can burn mouth, throat, and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| Chronic Effects | Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Avoid repeated exposure. Possible risks of irreversible effects. May cause adverse effects on the bone marrow and blood-forming system. Contains a known or suspected reproductive toxin. |
| Main Symptoms | Severe exposures can lead to shock, circulatory collapse, and death. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite indigestion, nausea, vomiting, constipation, sleep disturbances and overall weakness. |
| Aggravated Medical Conditions | Central nervous system. Gastrointestinal tract. Pre-existing eye disorders. Blood disorders. Kidney disorders. Overexposure may cause female and male reproductive disorder(s). Skin disorders. Respiratory disorders. Reproductive toxicity. Gingival Tissue Teeth. |
| Interactions with Other Chemicals | Use of alcoholic beverages may enhance toxic effects. |
| Environmental Hazard | See Section 12 for additional Ecological Information. |

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES

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|-----------------------------------|--|
| General Advice | First aid is upon rupture of sealed battery. |
| Eye Contact | Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Call a physician immediately. |
| Skin Contact | Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Call a physician immediately. |
| Inhalation | Immediate medical attention is required. Move to fresh air in case of accidental inhalation of vapors or decomposition products. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician or Poison Control Center immediately. |
| Ingestion | Immediate medical attention is required. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately. |
| Notes to Physician | Product is a corrosive material. 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. |
| Protection of First-aiders | Use personal protective equipment. Avoid contact with skin, eyes and clothing. |

5. FIRE-FIGHTING MEASURES

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| | |
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| Flammable Properties | Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. |
| Flash Point | Not determined. |
| Suitable Extinguishing Media | Dry chemical, CO ₂ or water spray. Move containers from fire area if you can do it without risk. Dike fire control water for later disposal; do not scatter the material. |
| Uniform Fire Code | <ul style="list-style-type: none"> • Corrosive: Acid-Liquid |
| Hazardous Combustion Products | Carbon oxides. |
| <u>Explosion Data</u> | |
| Sensitivity to Mechanical Impact | No. |
| Specific Hazards Arising from the Chemical | The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes. |
| Sensitivity to Static Discharge | No. |
| Protective Equipment and Precautions for Firefighters | |
| As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. | |

| | | | | |
|--------------------|-----------------|----------------|-------------|--|
| <u>NFPA</u> | Health Hazard 3 | Flammability 0 | Stability 2 | Physical and Chemical Hazards - |
|--------------------|-----------------|----------------|-------------|--|

6. ACCIDENTAL RELEASE MEASURES

| | |
|----------------------------------|--|
| Personal Precautions | ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Stop leak if you can do it without risk. |
| Environmental Precautions | Prevent spreading of vapors through sewers, ventilation systems and confined areas. |
| Methods for Containment | Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. |
| Methods for Cleaning Up | Use personal protective equipment. Dam up. Cover liquid spill with sand, earth or other noncombustible absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly. After cleaning, flush away traces with water. Prevent product and washings from entering drains, sewers or surface water due to high toxicity to aquatic organisms. |
| Other Information | DO NOT GET WATER INSIDE CONTAINERS. |

7. HANDLING AND STORAGE

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|-----------------|--|
| Handling | Wear personal protective equipment. In case of rupture: Ensure adequate ventilation. Prevent contact with skin, eyes and clothing Do not breathe vapors or spray mist. In case of insufficient ventilation, wear suitable respiratory equipment. |
| Storage | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

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-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection

Tightly fitting safety goggles. Face-shield.

Skin and Body Protection

Protective gloves.

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.

Hygiene Measures

When using, do not eat, drink or smoke. Remove and wash contaminated clothing before re-use. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Provide regular cleaning of equipment, work area and clothing. Avoid contact with skin, eyes and clothing. For environmental protection, remove and wash all contaminated protective equipment before re-use. Wear suitable gloves and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|-----------------------------------|---------------------------|---|--------------------------------|
| Appearance | Black. | Odor | No information available. |
| Odor Threshold | No information available | Physical State | Solid Solid containing liquid. |
| pH | No information available | | |
| Flash Point | No information available. | Autoignition Temperature | No information available |
| Decomposition Temperature | No information available | Boiling Point/Range | No information available |
| Melting Point/Range | No information available | | |
| Flammability Limits in Air | No information available | Explosion Limits | No information available |
| Water Solubility | Immiscible in water | Solubility | No information available |
| Evaporation Rate | No information available | Vapor Pressure | No data available |
| Vapor Density | No data available | Partition Coefficient: n-octanol/water | |

10. STABILITY AND REACTIVITY

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|---|---|
| Stability | Stable under recommended storage conditions. |
| Incompatible Products | Incompatible with strong acids and bases. Incompatible with oxidizing agents. |
| Conditions to Avoid | Exposure to air or moisture over prolonged periods. Protect from water. |
| Hazardous Decomposition Products | Thermal decomposition can lead to release of irritating gases and vapors. |
| Hazardous Polymerization | Hazardous polymerization does not occur. |

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information**Chronic Toxicity****Chronic Toxicity**

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Avoid repeated exposure. Possible risks of irreversible effects. May cause adverse effects on the bone marrow and blood-forming system. Contains a known or suspected reproductive toxin.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive Toxicity

Product is or contains a chemical which is a known or suspected reproductive hazard.

Developmental Toxicity

Contains ingredients that have suspected developmental hazards

Target Organ Effects

Blood. Reproductive system. Damage to fetus possible Central nervous system (CNS). Eyes. Gastrointestinal tract (GI). Gingival Tissue. Kidney. Respiratory system. Skin. Teeth.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic organisms.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods

This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). Should not be released into the environment.

Contaminated Packaging

Do not re-use empty containers.

US EPA Waste Number

D002
D008

California Hazardous Waste Codes

792

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

14. TRANSPORT INFORMATION

| | |
|-----------------|---------------|
| <u>DOT</u> | NOT REGULATED |
| <u>TDG</u> | Not regulated |
| <u>MEX</u> | Not regulated |
| <u>ICAO</u> | Not regulated |
| <u>IATA</u> | Not regulated |
| <u>IMDG/IMO</u> | Not regulated |

15. REGULATORY INFORMATION

International Inventories

TSCA Exempt
 DSL Not determined

U.S. 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:

SARA 311/312 Hazard Categories

| | |
|-----------------------------------|-----|
| Acute Health Hazard | Yes |
| Fire Hazard | Yes |
| Sudden Release of Pressure Hazard | No |
| Reactive Hazard | No |

Clean Water Act

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

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

U.S. State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals:

| Chemical Name | CAS-No | California Prop. 65 |
|---------------|-----------|---|
| Lead | 7439-92-1 | Carcinogen Developmental Female Reproductive Male Reproductive |

U.S. State Right-to-Know Regulations

| Chemical Name | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|---------------|---------------|------------|--------------|----------|--------------|
| Sulfuric acid | X | X | X | X | X |
| Lead | X | X | X | X | X |

International Regulations

Mexico - Grade

Moderate risk, Grade 2

| Chemical Name | Carcinogen Status | Exposure Limits |
|---------------|-------------------|-------------------------------------|
| Sulfuric acid | A2 | Mexico: TWA 1 mg/m ³ |
| Lead | A3 | Mexico: TWA= 0.15 mg/m ³ |

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

D2A Very toxic materials

E Corrosive material



| Chemical Name | NPRI |
|---------------|------|
| Sulfuric acid | X |
| Lead | X |

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

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|----------------------|--------------------------|
| Issuing Date | 28-Feb-2011 |
| Revision Date | 28-Feb-2011 |
| Revision Note | No information available |

General 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 a 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 in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet