Safety Data Sheet

According to OSHA HCS 2012 (29 CFR 1910.1200), Health Canada HPR (SOR/2015-17), and Mexico NOM-018-STPS-2015

SECTION 1: Identification

Product Identifier John Deere Turf-Gard® Supreme Motor Oil John Deere Turf-Gard® Supreme Motor Oil, SAE 10W-30 Other means of identification

Code Issue date 19-Nov-2019

Relevant identified uses Automotive Engine Oil

Uses advised against All others

24 Hour Emergency Phone Number CHEMTREC: 1-800-424-9300

CHEMTREC Mexico 01-800-681-9531 CHEMTREC Global +1 703 527 3887

Phillips 66 Lubricants Manufacturer/Supplier

A Division of Phillips 66 Company

P.O. Box 421959

Houston, Texas 77242-1959 URL: www.phillips66.com/SDS

Phone: 800-762-0942

Email: SDS@P66.com

Customer Service U.S.: 800-368-7128 or International: 1-832-765-2500

Technical Information 1-877-445-9198

SECTION 2: Hazard identification

Hazards Not Otherwise Classified (HNOC) Classified Hazards

No classified hazards PHNOC: None known

HHNOC: None known

Label elements

SDS Information

No classified hazards

SECTION 3: Composition/information on ingredients

Chemical Name	CASRN	Concentration ¹
Distillates, petroleum, hydrotreated heavy	64742-54-7	<100
paraffinic		

¹ All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

SECTION 4: First aid measures

Eye Contact: If irritation or redness develops from exposure, flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: First aid is not normally required. However, it is good practice to wash any chemical from the skin.

Inhalation: First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.

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Ingestion: First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

Most important symptoms and effects, both acute and delayed: Inhalation of oil mists or vapors generated at elevated temperatures may cause respiratory irritation. Accidental ingestion can result in minor irritation of the digestive tract, nausea and diarrhea. Prolonged or repeated contact may dry skin and cause irritation.

Notes to Physician: Acute aspirations of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities.

SECTION 5: Firefighting measures

NFPA 704: National Fire Protection Association

Health 0 Flammability: 1 **Instability:** 0



0 = minimal hazard

1 = slight hazard

2 = moderate hazard

3 = severe hazard

4 = extreme hazard

Extinguishing Media: Dry chemical, carbon dioxide, foam, or water spray is recommended. Water or foam may cause frothing of materials heated above 212°F / 100°C. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

Specific hazards arising from the chemical

Unusual Fire & Explosion Hazards: This material may burn, but will not ignite readily. If container is not properly cooled, it can rupture in the heat of a fire.

Hazardous Combustion Products: Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Oxides of sulfur, nitrogen or phosphorus may also be formed.

Special protective actions for fire-fighters: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8). Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely. Avoid spreading burning liquid with water used for cooling purposes.

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures: This material may burn, but will not ignite readily. Keep all sources of ignition away from spill/release. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental Precautions: Stop and contain spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems, and natural waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods and material for containment and cleaning up: Notify relevant authorities in accordance with all applicable regulations. Immediate cleanup of any spill is recommended. Dike far ahead of spill for later recovery or disposal. Absorb spill with inert material such as sand or vermiculite, and place in suitable container for disposal. If spilled on water remove with appropriate methods (e.g. skimming, booms or absorbents). In case of soil contamination, remove contaminated soil for remediation or

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disposal, in accordance with local regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken. See Section 13 for information on appropriate disposal.

SECTION 7: Handling and storage

Precautions for safe handling: Keep away from flames and hot surfaces. Wash thoroughly after handling. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8). Spills will produce very slippery surfaces. Used motor oils have been shown to cause skin cancer in mice after repeated application to the skin without washing. Brief or intermittent skin contact with used motor oil is not expected to cause harm if the oil is thoroughly removed by washing with soap and water. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Do not wear contaminated clothing or shoes.

Conditions for safe storage: Keep container(s) tightly closed and properly labeled. Use and store this material in cool, dry, well-ventilated area away from heat and all sources of ignition. Store only in approved containers. Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. "Empty" drums should be completely drained, properly bunged, and promptly shipped to the supplier or a drum reconditioner. All containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Before working on or in tanks which contain or have contained this material, refer to OSHA regulations, ANSI Z49.1, and other references pertaining to cleaning, repairing, welding, or other contemplated operations.

SECTION 8: Exposure controls/personal protection

Occupational exposure limits .					
Chemical Name	ACGIH	OSHA	Mexico	Phillips 66	
Distillates, petroleum, hydrotreated heavy paraffinic	TWA-8hr: 5 mg/m ³ STEL: 10 mg/m ³ as Oil Mist, if Generated				

State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Biological occupational exposure limits

None.

Engineering controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Eye/Face Protection: The use of eye/face protection is not normally required; however, good industrial hygiene practice suggests the use of eye protection that meets or exceeds ANSI Z.87.1 whenever working with chemicals.

Skin/Hand Protection: The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Suggested protective materials: Nitrile rubber

Respiratory Protection: Where there is potential for airborne exposure above the exposure limit a NIOSH certified air purifying respirator equipped with R or P95 filters may be used.

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use. Air purifying respirators provide limited protection and cannot be used in atmospheres that exceed the maximum use concentration (as directed by regulation or the manufacturer's instructions), in oxygen deficient (less than 19.5 percent oxygen) situations, or under conditions that are immediately dangerous to life and health (IDLH).

Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

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SECTION 9: Physical and chemical properties

Note: Unless otherwise stated, values are determined at 20°C (68°F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

Appearance: Amber, Transparent Flash Point: Minimum 365 °F / 185 °C

Physical Form: Liquid Test Method: Pensky-Martens Closed Cup (PMCC), ASTM D93, EPA 1010

Initial Boiling Point/Range: No data Odor: Petroleum

Odor Threshold: No data Vapor Pressure: <1 mm Hg

pH: Not applicable Partition Coefficient (n-octanol/water) (Kow): No data

Vapor Density (air=1): >1 Melting/Freezing Point: No data Upper Explosive Limits (vol % in air): No data Auto-ignition Temperature: No data Lower Explosive Limits (vol % in air): No data **Decomposition Temperature:** No data

Evaporation Rate (nBuAc=1): <1 **Specific Gravity (water=1):** 0.86 - 0.87 @ 60°F (15.6°C)

Bulk Density: 7.16 - 7.24 lbs/gal Particle Size: Not applicable

Percent Volatile: Negligible Viscosity: 10.0 - 11.0 cSt @ 100°C; 64.0 - 72.0 cSt @ 40°C

Flammability (solid, gas): Not applicable Pour Point: No data

Solubility in Water: Negligible

SECTION 10: Stability and reactivity

Reactivity: Not chemically reactive.

Chemical stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions: Hazardous reactions not anticipated.

Conditions to avoid: Extended exposure to high temperatures can cause decomposition. Avoid all possible sources of ignition.

Incompatible materials: Avoid contact with strong oxidizing agents and strong reducing agents.

Hazardous decomposition products: Not anticipated under normal conditions of use. During use in engines, contamination of oil with low levels of hazardous fuel combustion by-products (e.g. polycyclic aromatic hydrocarbons) may occur.

SECTION 11: Toxicological information

Information on Toxicological Effects

Substance / Mixture

Oubstance / Minkture					
Acute Toxicity	Hazard	Additional Information	LC50/LD50 Data		
Inhalation	Unlikely to be harmful		>5 mg/L (mist, estimated)		
Dermal	Unlikely to be harmful		> 2 g/kg (estimated)		
Oral	Unlikely to be harmful		> 5 g/kg (estimated)		

Likely Routes of Exposure: Inhalation, eye contact, skin contact

Aspiration Hazard: Not expected to be an aspiration hazard

Skin Corrosion/Irritation: Not expected to be irritating. Repeated exposure may cause skin dryness or cracking.

Serious Eye Damage/Irritation: Not expected to be irritating.

Skin Sensitization: No information available on the mixture, however none of the components have been classified for skin sensitization (or are below the concentration threshold for classification).

Respiratory Sensitization: No information available.

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Specific Target Organ Toxicity (Single Exposure): No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

Specific Target Organ Toxicity (Repeated Exposure): No information available on the mixture, however none of the components have been classified for target organ toxicity (or are below the concentration threshold for classification).

Carcinogenicity: No information available on the mixture, however none of the components have been classified for carcinogenicity (or are below the concentration threshold for classification).

Germ Cell Mutagenicity: No information available on the mixture, however none of the components have been classified for germ cell mutagenicity (or are below the concentration threshold for classification).

Reproductive Toxicity: No information available on the mixture, however none of the components have been classified for reproductive toxicity (or are below the concentration threshold for classification).

Information on Toxicological Effects of Components

Distillates, petroleum, hydrotreated heavy paraffinic

Carcinogenicity: This oil has been highly refined by a variety of processes to reduce aromatics and improve performance characteristics. It meets the IP-346 criteria of less than 3 percent PAH's and is not considered a carcinogen by the International Agency for Research on Cancer.

SECTION 12: Ecological information

GHS Classification:

No classified hazards

Toxicity: All acute aquatic toxicity studies on samples of lubricant base oils show acute toxicity values greater than 100 mg/L for invertebrates, algae and fish. These tests were carried out on water accommodated fractions and the results are consistent with the predicted aquatic toxicity of these substances based on their hydrocarbon compositions.

Persistence and Degradability: The hydrocarbons in this material are not readily biodegradable, but since they can be degraded by microorganisms, they are regarded as inherently biodegradable.

Bioaccumulative Potential: Log Kow values measured for the hydrocarbon components of this material are greater than 5.3, and therefore regarded as having the potential to bioaccumulate. In practice, metabolic processes may reduce bioconcentration.

Mobility in Soil: Volatilization to air is not expected to be a significant fate process due to the low vapor pressure of this material. In water, base oils will float and spread over the surface at a rate dependent upon viscosity. There will be significant removal of hydrocarbons from the water by sediment adsorption. In soil and sediment, hydrocarbon components will show low mobility with adsorption to sediments being the predominant physical process. The main fate process is expected to be slow biodegradation of the hydrocarbon constituents in soil and sediment.

Other adverse effects: None anticipated.

SECTION 13: Disposal considerations

The generator of a waste is always responsible for making proper hazardous waste determinations and needs to consider state and local requirements in addition to federal regulations. This material, if discarded as produced, would not be a federally regulated RCRA "listed" hazardous waste and is not believed to exhibit characteristics of hazardous waste. See Sections 7 and 8 for information on handling, storage and personal protection and Section 9 for physical/chemical properties. It is possible that the material as produced contains constituents which are not required to be listed in the SDS but could affect the hazardous waste determination. Additionally, use which results in chemical or physical change of this material could subject it to regulation as a hazardous waste. This material under most intended uses would become "Used Oil" due to contamination by physical or chemical impurities. Whenever possible, Recycle used oil in accordance with applicable federal and state or local regulations. Container contents should be completely used and containers should be emptied prior to discard.

SECTION 14: Transport information

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UN Number: Not regulated UN proper shipping name: None Transport hazard class(es): None

Packing Group: None

Environmental Hazard(s): This product does not meet the DOT/UN/IMDG/IMO criteria of a marine pollutant

Special precautions for user: If shipped by land in a packaging having a capacity of 3,500 gallons or more, the provisions of 49

CFR, Part 130 apply. (Contains oil)

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable

SECTION 15: Regulatory information

CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds)

This material does not contain any chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372.

CERCLA/SARA - Section 311/312 (Title III Hazard Categories)

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CERCLA/SARA - Section 313 and 40 CFR 372

This material does not contain any chemicals subject to the reporting requirements of SARA 313 and 40 CFR 372.

EPA (CERCLA) Reportable Quantity (in pounds)

This material does not contain any chemicals with CERCLA Reportable Quantities.

California Proposition 65

This material does not contain any chemicals which are known to the State of California to cause cancer, birth defects or other reproductive harm at concentrations that trigger the warning requirements of California Proposition 65.

International Inventories

All components are either listed on the US TSCA Inventory, or are not regulated under TSCA.

All components are either on the DSL, or are exempt from DSL listing requirements.

SECTION 16: Other information

Issue date	Previous Issue Date:	SDS Number	Status:
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Revised Sections or Basis for Revision:

Periodic review and update

Mexican NOM-018-STPS-2015:

The information within is considered correct but is not exhaustive and will be used for guidance only, which is based on the current knowledge of the substance or mixture and is applicable to the appropriate safety precautions for the product.

Guide to Abbreviations:

ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; HPR = Hazardous Products Regulations; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer of Expressed and implied Warranties:

The information presented in this Safety Data Sheet is based on data believed to be accurate as of the date this Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to

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adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

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SAFETY DATA SHEET

Issuing Date 20-Jul-2017

Revision Date 20-Jul-2017

Revision Number 1

NGHS / English



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1. IDENTIFICATION

Product identifier

Product Name LEAD ACID BATTERY WET FILLED WITH ACID

Other means of identification

Product Code(s) 1110599

Recommended use of the chemical and restrictions on use

Recommended Use Lead acid battery

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification East Penn Mfg.

Address Deka Rd

Lyon Station PA

19536 US

Telephone Phone:610-682-6361

Fax:610-682-1650

E-mail mgriffith@dekabatteries.com

Emergency telephone number

Company Emergency Phone

610-682-6361

Number

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1



Serious eye damage/eye irritation

Carcinogenicity

Category 1

Reproductive toxicity

Effects on or via lactation

Specific target organ toxicity (repeated exposure)

Corrosive to metals

Category 1

Category 1

Category 1

Category 1

Category 1

Category 1

This is a battery. In case of rupture: the above hazards exist.

Appearance Varies Physical state Solid Odor Odorless

GHS Label elements, including precautionary statements

Danger

Hazard statements

Harmful if swallowed

Toxic if inhaled

Causes severe skin burns and eye damage

May cause cancer

May damage fertility or the unborn child

May cause harm to breast-fed children

Causes damage to organs through prolonged or repeated exposure

May be corrosive to metals



Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Do not breathe dust/fume/gas/mist/vapors/spray

Avoid contact during pregnancy/while nursing

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell



Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Spill

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in corrosion resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Very toxic to aquatic life with long lasting effects.

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS-No	Percent	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Lead	7439-92-1	70	-	-
Sulfuric acid	7664-93-9	26	-	-
Antimony	7440-36-0	4	-	-

4. FIRST AID MEASURES

First aid measures

General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention. First aid is upon rupture of sealed battery.

Inhalation

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 substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Do not breathe dust. Get immediate medical advice/attention.



Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open

while rinsing. Do not rub affected area. Get immediate medical advice/attention.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Get immediate medical advice/attention.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Get immediate medical

advice/attention.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the

material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective

equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians 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.

5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

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.

Hazardous Combustion Products Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not



breathe dust.

Other Information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Do not breathe dust. Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep out of the reach of children. Store away from other materials. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name		ACGIH T	LV	0:	SHA PEL		NIOSH IDLH
Lead		TWA: 0.05 mg/m ³		TWA: 50 μg/m³ TWA: 50 μg/m³		IDL	H: 100 mg/m³ IDLH: 100
7439-92-1					Pb		mg/m³ Pb
					.evel: 30 µg/m³	TWA:	0.050 mg/m ³ TWA: 0.050
					29 CFR 1910.1025		mg/m³ Pb
					vel: 30 µg/m³ Pb		
				Poison;See	29 CFR 1910.1025		
Sulfuric acid		TWA: 0.2 mg/m ²			4: 1 mg/m³		IDLH: 15 mg/m ³
7664-93-9		particulate matter		(vacated	(vacated) TWA: 1 mg/m ³		TWA: 1 mg/m ³
Antimony		TWA: 0.5 mg/m ³			mg/m³ TWA: 0.5	IDL	_H: 50 mg/m³ IDLH: 50
7440-36-0		mg/m³ S	Sb		ıg/m³ Sb		mg/m³ Sb
					TWA: 0.5 mg/m ³	TW	A: 0.5 mg/m³ TWA: 0.5
				(vacated) T	WA: 0.5 mg/m ³ Sb		mg/m³ Sb
Chemical name		Alberta	British C	Columbia	Ontario TWAE	V	Quebec
Lead	TV	VA: 0.05 mg/m ³	TWA: 0.0	05 mg/m ³	TWA: 0.05 mg/ı	m³	TWA: 0.05 mg/m ³
7439-92-1							
Sulfuric acid		ΓWA: 1 mg/m³	TWA: 0.	2 mg/m³	TWA: 0.2 mg/n	n ³	TWA: 1 mg/m ³
7664-93-9	S	STEL: 3 mg/m ³					STEL: 3 mg/m ³
Antimony	T'	WA: 0.5 mg/m ³	TWA: 0.	5 mg/m³	TWA: 0.5 mg/n	n ³	TWA: 0.5 mg/m ³
7440-36-0							



Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

(11th Cir., 1992). See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

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.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wear suitable

gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Do not

breathe dust. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state Solid
Appearance Varies
Odor Odorless

ColorNo information availableOdor ThresholdNo information available

<u>Property</u> <u>Values</u> <u>Remarks Method</u>

oH 2

No data available Melting / freezing point None known Boiling point / boiling range No data available None known No data available **Flash Point** None known No data available **Evaporation Rate** None known None known Flammability (solid, gas) No data available Flammability Limit in Air None known

Upper flammability limit No data available

Lower flammability limit No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone known

Relative density 1.27

Water Solubility Reacts with water

Solubility(ies) No data available None known

Partition coefficient: n-octanol/waterNA

Autoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone known



Dynamic viscosity No data available None known

Other Information

Explosive properties No information available **Oxidizing properties** No information available No information available **Softening Point** Molecular Weight No information available No information available **VOC Content (%) Liquid Density** No information available **Bulk Density** No information available Particle Size No information available **Particle Size Distribution** No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials Oxidizing agent. Acids. Bases.

Hazardous Decomposition Products Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information

In case of rupture:

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation.

(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Pulmonary edema can be fatal. Toxic by inhalation.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Corrosive to the eyes and may cause severe damage including blindness.

Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on

components). Causes burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Ingestion causes 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.



Information on toxicological effects

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing. Difficulty in

breathing.

Numerical measures of toxicity

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 624.00 mg/kg
ATEmix (inhalation-gas) 4,500.00 mg/L
ATEmix (inhalation-dust/mist) 0.66 mg/L
ATEmix (inhalation-vapor) 11.00 mg/L

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid	= 2140 mg/kg (Rat)	-	= 510 mg/m ³ (Rat) 2 h
Antimony	= 7 g/kg (Rat)	-	-

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes.

Causes burns.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Classification based on data available for ingredients. Contains a known or suspected

carcinogen.

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

The table below indicates whether each agency has noted any ingredient as a sarolnegen.					
Chemical name	ACGIH	IARC	NTP	OSHA	
Lead 7439-92-1	А3	Group 2A	Reasonably Anticipated	Х	
Sulfuric acid 7664-93-9	A2	Group 1	Known	Х	

Legend

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

NTP (National Toxicology Program)

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 Classification based on data available for ingredients. Contains a known or suspected

reproductive toxin. May cause harm to breastfed babies.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to	Daphnia Magna (Water
			Microorganisms	Flea)
Lead	-	96h LC50: = 0.44 mg/L	-	48h EC50: = 600 μg/L
		(Cyprinus carpio) 96h		
		LC50: = 1.17 mg/L		
		(Oncorhynchus mykiss)		
		96h LC50: = 1.32 mg/L		
		(Oncorhynchus mykiss)		
Sulfuric acid	-	96h LC50: > 500 mg/L	-	24h EC50: = 29 mg/L
		(Brachydanio rerio)		

Persistence and Degradability No information available.

Bioaccumulation There is no data for this product.

MobilityNo information available.Other adverse effectsNo information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D008 D002

Chemical name	RCRA - Halogenated	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
	Organic Compounds			
Antimony				Toxic waste
7440-36-0				waste number K021
				Waste description:
				Aqueous spent antimony
				catalyst waste from
				fluoromethanes
				production.



California Hazardous Waste Codes 792

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

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

14. TRANSPORT INFORMATION

DOT

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

Emergency Response Guide 154

Number

<u>TDG</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to TDG.

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

MEX

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

<u>ICAO</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

<u>IATA</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8 ERG Code 8L

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

IMDG/IMO

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

EmS-No. F-A, S-B

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to

IMDG/IMO

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8



<u>RID</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

ADR/RID-Labels 8

<u>ADR</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11
Tunnel restriction code (E)

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8, (E)

ADN

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11
Special Provisions 295, 598

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

Hazard Labels 8 Limited Quantity 1 L

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA

DSL/NDSL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

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	CAS-No	Percent	SARA 313 - Threshold Values %
Lead - 7439-92-1	7439-92-1	70	0.1
Sulfuric acid - 7664-93-9	7664-93-9	26	1.0
Antimony - 7440-36-0	7440-36-0	4	1.0

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

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead 7439-92-1		X	Х	
Sulfuric acid 7664-93-9	1000 lb			X
Antimony 7440-36-0		X	Х	

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)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Lead 7439-92-1	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Antimony 7440-36-0	5000 lb 10 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Lead - 7439-92-1	Carcinogen
	Developmental
	Female Reproductive
	Male Reproductive
Sulfuric acid - 7664-93-9	Carcinogen

U.S. State Right-to-Know Regulations



Chemical name	New Jersey	Massachusett	Pennsylvania	Rhode Island	Illinois
		S			
Lead	Х	Х	Х	Х	X
7439-92-1					
Sulfuric acid	Х	X	Х	X	Х
7664-93-9					
Antimony	X	Х	Х	X	Х
7440-36-0					

16. OTHER INFORMATION

NFPA Health hazards 1 Flammability 0 Instability 0 Physical and Chemical

Properties -

HMIS Health hazards 0 Flammability 0 Physical hazards 0 Personal Protection X

Prepared By Product Stewardship

23 British American Blvd. Latham, NY 12110 1-800-572-6501

Issuing Date 20-Jul-2017

Revision Date 20-Jul-2017

Revision Note No information available

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



SAFETY DATA SHEET

Issuing Date 20-Jul-2017

Revision Date 20-Jul-2017

Revision Number 1

NGHS / English



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1. IDENTIFICATION

Product identifier

Product Name LEAD ACID BATTERY WET FILLED WITH ACID

Other means of identification

Product Code(s) 1110599

Recommended use of the chemical and restrictions on use

Recommended Use Lead acid battery

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification East Penn Mfg.

Address Deka Rd

Lyon Station PA

19536 US

Telephone Phone:610-682-6361

Fax:610-682-1650

E-mail mgriffith@dekabatteries.com

Emergency telephone number

Company Emergency Phone

610-682-6361

Number

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1



Serious eye damage/eye irritation

Carcinogenicity

Category 1

Reproductive toxicity

Effects on or via lactation

Specific target organ toxicity (repeated exposure)

Corrosive to metals

Category 1

Category 1

Category 1

Category 1

Category 1

Category 1

This is a battery. In case of rupture: the above hazards exist.

Appearance Varies Physical state Solid Odor Odorless

GHS Label elements, including precautionary statements

Danger

Hazard statements

Harmful if swallowed

Toxic if inhaled

Causes severe skin burns and eye damage

May cause cancer

May damage fertility or the unborn child

May cause harm to breast-fed children

Causes damage to organs through prolonged or repeated exposure

May be corrosive to metals



Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Do not breathe dust/fume/gas/mist/vapors/spray

Avoid contact during pregnancy/while nursing

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell



Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Spill

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in corrosion resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Very toxic to aquatic life with long lasting effects.

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS-No	Percent	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Lead	7439-92-1	70	-	-
Sulfuric acid	7664-93-9	26	-	-
Antimony	7440-36-0	4	-	-

4. FIRST AID MEASURES

First aid measures

General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention. First aid is upon rupture of sealed battery.

Inhalation

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 substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Do not breathe dust. Get immediate medical advice/attention.



Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open

while rinsing. Do not rub affected area. Get immediate medical advice/attention.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Get immediate medical advice/attention.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Get immediate medical

advice/attention.

Self-protection of the first aider Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the

material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective

equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians 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.

5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

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.

Hazardous Combustion Products Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not



breathe dust.

Other Information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Do not breathe dust. Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep out of the reach of children. Store away from other materials. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name		ACGIH T	LV	0:	SHA PEL	NIOSH IDLH	
Lead		TWA: 0.05 mg/m ³		TWA: 50 μg/m³ TWA: 50 μg/m³		IDLH: 100 mg/m ³ IDLH: 100	
7439-92-1					Pb		mg/m³ Pb
					.evel: 30 µg/m³	TWA:	0.050 mg/m ³ TWA: 0.050
					29 CFR 1910.1025		mg/m³ Pb
					vel: 30 µg/m³ Pb		
				Poison;See	29 CFR 1910.1025		
Sulfuric acid		TWA: 0.2 mg/m ²			4: 1 mg/m³		IDLH: 15 mg/m ³
7664-93-9		particulate matter		(vacated	cated) TWA: 1 mg/m ³		TWA: 1 mg/m ³
Antimony		TWA: 0.5 mg/m ³ TWA: 0.5			mg/m³ TWA: 0.5	IDLH: 50 mg/m³ IDLH: 50	
7440-36-0		mg/m³ Sb			ıg/m³ Sb		mg/m³ Sb
					TWA: 0.5 mg/m ³	TW	A: 0.5 mg/m³ TWA: 0.5
				(vacated) T	WA: 0.5 mg/m ³ Sb		mg/m³ Sb
Chemical name		Alberta	British C	Columbia	Ontario TWAE	V	Quebec
Lead	TV	VA: 0.05 mg/m ³	TWA: 0.0	05 mg/m ³	TWA: 0.05 mg/ı	m³	TWA: 0.05 mg/m ³
7439-92-1							
Sulfuric acid		ΓWA: 1 mg/m³	TWA: 0.	2 mg/m³	TWA: 0.2 mg/n	n ³	TWA: 1 mg/m ³
7664-93-9	S	STEL: 3 mg/m ³					STEL: 3 mg/m ³
Antimony	T'	WA: 0.5 mg/m ³	TWA: 0.	5 mg/m³	TWA: 0.5 mg/n	n ³	TWA: 0.5 mg/m ³
7440-36-0							



Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

(11th Cir., 1992). See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

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.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wear suitable

gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Do not

breathe dust. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state Solid
Appearance Varies
Odor Odorless

ColorNo information availableOdor ThresholdNo information available

<u>Property</u> <u>Values</u> <u>Remarks Method</u>

oH 2

No data available Melting / freezing point None known Boiling point / boiling range No data available None known No data available **Flash Point** None known No data available **Evaporation Rate** None known None known Flammability (solid, gas) No data available Flammability Limit in Air None known

Upper flammability limit No data available

Lower flammability limit No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone known

Relative density 1.27

Water Solubility Reacts with water

Solubility(ies) No data available None known

Partition coefficient: n-octanol/waterNA

Autoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone known



Dynamic viscosity No data available None known

Other Information

Explosive properties No information available **Oxidizing properties** No information available No information available **Softening Point** Molecular Weight No information available No information available **VOC Content (%) Liquid Density** No information available **Bulk Density** No information available Particle Size No information available **Particle Size Distribution** No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials Oxidizing agent. Acids. Bases.

Hazardous Decomposition Products Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information

In case of rupture:

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation.

(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Pulmonary edema can be fatal. Toxic by inhalation.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Corrosive to the eyes and may cause severe damage including blindness.

Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on

components). Causes burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Ingestion causes 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.



Information on toxicological effects

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing. Difficulty in

breathing.

Numerical measures of toxicity

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 624.00 mg/kg
ATEmix (inhalation-gas) 4,500.00 mg/L
ATEmix (inhalation-dust/mist) 0.66 mg/L
ATEmix (inhalation-vapor) 11.00 mg/L

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid	= 2140 mg/kg (Rat)	-	= 510 mg/m ³ (Rat) 2 h
Antimony	= 7 g/kg (Rat)	-	-

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes.

Causes burns.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Classification based on data available for ingredients. Contains a known or suspected

carcinogen.

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

The table below indicates whether each agency has noted any ingredient as a saremegen.						
Chemical name	ACGIH	IARC	NTP	OSHA		
Lead 7439-92-1	А3	Group 2A	Reasonably Anticipated	Х		
Sulfuric acid 7664-93-9	A2	Group 1	Known	Х		

Legend

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

NTP (National Toxicology Program)

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 Classification based on data available for ingredients. Contains a known or suspected

reproductive toxin. May cause harm to breastfed babies.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to	Daphnia Magna (Water
			Microorganisms	Flea)
Lead	-	96h LC50: = 0.44 mg/L	-	48h EC50: = 600 μg/L
		(Cyprinus carpio) 96h		
		LC50: = 1.17 mg/L		
		(Oncorhynchus mykiss)		
		96h LC50: = 1.32 mg/L		
		(Oncorhynchus mykiss)		
Sulfuric acid	-	96h LC50: > 500 mg/L	-	24h EC50: = 29 mg/L
		(Brachydanio rerio)		_

Persistence and Degradability No information available.

Bioaccumulation There is no data for this product.

MobilityNo information available.Other adverse effectsNo information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D008 D002

Chemical name	RCRA - Halogenated	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
	Organic Compounds			
Antimony				Toxic waste
7440-36-0				waste number K021
				Waste description:
				Aqueous spent antimony
				catalyst waste from
				fluoromethanes
				production.



California Hazardous Waste Codes 792

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

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

14. TRANSPORT INFORMATION

DOT

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

Emergency Response Guide 154

Number

<u>TDG</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to TDG.

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

MEX

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

<u>ICAO</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

<u>IATA</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8 ERG Code 8L

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

IMDG/IMO

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

EmS-No. F-A, S-B

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to

IMDG/IMO

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8



<u>RID</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

ADR/RID-Labels 8

<u>ADR</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11
Tunnel restriction code (E)

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8, (E)

ADN

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11
Special Provisions 295, 598

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

Hazard Labels 8 Limited Quantity 1 L

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA

DSL/NDSL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

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	CAS-No	Percent	SARA 313 - Threshold Values %
Lead - 7439-92-1	7439-92-1	70	0.1
Sulfuric acid - 7664-93-9	7664-93-9	26	1.0
Antimony - 7440-36-0	7440-36-0	4	1.0

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

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead 7439-92-1		X	Х	
Sulfuric acid 7664-93-9	1000 lb			X
Antimony 7440-36-0		X	Х	

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)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Lead 7439-92-1	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Antimony 7440-36-0	5000 lb 10 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65	
Lead - 7439-92-1	Carcinogen	
	Developmental	
	Female Reproductive	
	Male Reproductive	
Sulfuric acid - 7664-93-9	Carcinogen	

U.S. State Right-to-Know Regulations



Chemical name	New Jersey	Massachusett	Pennsylvania	Rhode Island	Illinois
		S			
Lead	X	Х	Х	Х	X
7439-92-1					
Sulfuric acid	X	X	Х	X	Х
7664-93-9					
Antimony	X	Х	Х	X	Х
7440-36-0					

16. OTHER INFORMATION

NFPA Health hazards 1 Flammability 0 Instability 0 Physical and Chemical

Properties -

HMIS Health hazards 0 Flammability 0 Physical hazards 0 Personal Protection X

Prepared By Product Stewardship

23 British American Blvd. Latham, NY 12110 1-800-572-6501

Issuing Date 20-Jul-2017

Revision Date 20-Jul-2017

Revision Note No information available

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



SAFETY DATA SHEET

Issuing Date 23-Mar-2016 Revision Date 29-Mar-2016 Revision Number 4



The supplier identified below generated this SDS using the UL SDS template. UL did not test, certify, or approve the substance described in this SDS, and all information in this SDS was provided by the supplier or was reproduced from publically available regulatory data sources. UL makes no representations or warranties regarding the completeness or accuracy of the information in this SDS and disclaims all liability in connection with the use of this information or the substance described in this SDS. The layout, appearance and format of this SDS is © 2014 UL LLC. All rights reserved.

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name LEAD ACID BATTERY WET FILLED WITH ACID

Other means of identification

UN-No. UN2794

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Lead acid battery

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name East Penn Mfg.

Supplier Address Deka Rd

Lyon Station

PA 19536 US

Supplier Phone Number Phone:610-682-6361

Fax:610-682-1650

Supplier Email mgriffith@dekabatteries.com

Emergency telephone number

Company Emergency Phone

Number

610-682-6361

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). 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.



Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A
Reproductive Toxicity	Category 1A
Specific target organ toxicity (repeated exposure)	Category 1

GHS Label elements, including precautionary statements

Emergency Overview

Signal word Danger

Hazard Statements

Harmful if swallowed Toxic if inhaled

Causes severe skin burns and eye damage

May cause cancer

May damage fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure



This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. 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.

Appearance Colorless Physical state Solid Odor Odorless

Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower



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Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Unknown Toxicity

0 % of the mixture consists of ingredient(s) of unknown toxicity

Other information

Very toxic to aquatic life with long lasting effects

Interactions with Other Chemicals

Use of alcoholic beverages may enhance toxic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

.

Chemical name	CAS No	Weight-%	Trade Secret
Lead	7439-92-1	60 - 100	*
Sulfuric acid	7664-93-9	10 - 30	*
Antimony	7440-36-0	1 - 5	*

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First aid measures

General Advice First aid is upon rupture of sealed battery.

Eye contact 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. Remove contact lenses, if present

and easy to do. Continue rinsing. Seek immediate medical attention/advice.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Seek immediate medical attention/advice.

(II)

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Inhalation Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult,

(trained personnel should) give oxygen. Avoid direct contact with skin. Use barrier to give

mouth-to-mouth resuscitation.

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.

Self-protection of the first aider Ensure that medical personnel are aware of the material(s) involved, take precautions to

protect themselves and prevent spread of contamination. Avoid direct contact with skin. Use

barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and

Effects

Burning sensation. Coughing and/ or wheezing. Difficulty in breathing. Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite indigestion, nausea, vomiting, constipation, sleep disturbances and overall weakness. Severe exposures can lead to shock, circulatory collapse, and death.

Indication of any immediate medical attention and special treatment needed

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.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO2). Water spray.

Unsuitable extinguishing media

CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical

Some are oxidizers and may ignite combustibles (wood, paper, oil, clothing, etc.).

Uniform Fire Code Toxic: Solid

Corrosive: Acid-Liquid

Explosion Data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

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.



6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Attention! Corrosive material. 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.

Other Information DO NOT GET WATER INSIDE CONTAINERS.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Use water spray to

reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled

material.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning upSoak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling In case of rupture: Handle in accordance with good industrial hygiene and safety practice.

Avoid contact with skin, eyes or clothing. Use personal protection equipment.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from

moisture. Store locked up. Keep out of the reach of children. Store away from other

materials.

Incompatible Products Acids. Bases. Oxidizing agent.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Lead	TWA: 0.05 mg/m ³	TWA: 50 μg/m³ TWA: 50 μg/m³	IDLH: 100 mg/m ³
7439-92-1		Pb	TWA: 0.050 mg/m ³
		Action Level: 30 µg/m³ Poison,	
		See 29 CFR 1910.1025 Action	
		Level: 30 µg/m³ Pb Poison, See	
		29 CFR 1910.1025	
Sulfuric acid	TWA: 0.2 mg/m³ thoracic fraction	TWA: 1 mg/m ³	IDLH: 15 mg/m ³
7664-93-9		(vacated) TWA: 1 mg/m ³	TWA: 1 mg/m ³
Antimony	TWA: 0.5 mg/m ³ TWA: 0.5 mg/m ³	TWA: 0.5 mg/m ³ TWA: 0.5 mg/m ³	IDLH: 50 mg/m ³



7440-36-0	Sb	Sb	TWA: 0.5 mg/m ³
		(vacated) TWA: 0.5 mg/m ³	-
		(vacated) TWA: 0.5 mg/m ³ Sb	

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)

Appropriate engineering controls

Engineering Measures Showers

Eyewash stations Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Skin and body protection Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant

apron. Impervious gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved

respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be

provided in accordance with current local regulations.

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with

skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Take off

contaminated clothing and wash before reuse. Do not breathe dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical stateSolidAppearanceColorlessOdorOdorless

Color No information available Odor Threshold No information available

Remarks Method **Property** Values None known pН Melting / freezing point No data available None known Boiling point / boiling range No data available None known **Flash Point** No data available None known **Evaporation Rate** No data available None known Flammability (solid, gas) No data available None known Flammability Limit in Air

Upper flammability limit
Lower flammability limit
No data available
No data available
No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone knownSpecific Gravity1.27None knownWater SolubilitySoluble in waterNone known

Water SolubilitySoluble in waterNone knownSolubility in other solventsNo data availableNone knownPartition coefficient: n-octanol/waterNo data availableNone known



Autoignition temperature No data available None known No data available **Decomposition temperature** None known Kinematic viscosity No data available None known **Dynamic viscosity** No data available None known **Explosive properties** No data available **Oxidizing properties** No data available

Other Information

Softening Point
VOC Content (%)
Particle Size
No data available
No data available
No data available

Particle Size Distribution

10. STABILITY AND REACTIVITY

Reactivity

No data available.

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials

Acids. Bases. Oxidizing agent.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

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

In case of rupture:.

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation.

(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract. Toxic by inhalation.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Corrosive to the eyes and may cause severe damage including blindness.

Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Prolonged skin contact causes burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Ingestion causes 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,

(U)

vomiting and diarrhea. Harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid 7664-93-9	= 2140 mg/kg (Rat)	-	= 510 mg/m³ (Rat) 2 h
Antimony 7440-36-0	= 7 g/kg(Rat)	-	-

Information on toxicological effects

Symptoms Erythema (skin redness). Burning. May cause blindness. Coughing and/ or wheezing.

Difficulty in breathing.

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

Sensitization No information available.

Mutagenic Effects No information available.

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

Chemical name	ACGIH	IARC	NTP	OSHA
Lead 7439-92-1	A3	Group 2A	Reasonably Anticipated	X
Sulfuric acid 7664-93-9	A2	Group 1	Known	Х

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

NTP (National Toxicology Program)

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

Contains a known or suspected reproductive toxin.

Developmental Toxicity STOT - single exposure

Contains ingredients that have suspected developmental hazards.

No information available.

STOT - repeated exposureCauses 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 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. Effects from this product caused by acute exposure may cause permanent damage to target organs and/or may cause chronic conditions. Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin. Possible risk of irreversible effects. Avoid repeated exposure. Prolonged exposure may cause chronic effects. May cause adverse effects on the bone marrow and blood-forming system. 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.

Target Organ Effects Blood. Reproductive System. May damage the unborn child. Central Nervous System

(CNS). Central Vascular System (CVS). Eyes. Gastrointestinal tract (GI). Gingival Tissue. Kidney. Respiratory system. Skin. Teeth. Systemic Toxicity. Cardiovascular system.

Hematopoietic system. Immune system.

Aspiration Hazard No information available.

Numerical measures of toxicity Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral)
624.00 mg/kg
ATEmix (inhalation-gas)
6,081.00 ppm (4 hr)
ATEmix (inhalation-dust/mist)
0.66 mg/l
ATEmix (inhalation-vapor)
15.00 ATEmix

12. ECOLOGICAL INFORMATION

Ecotoxicity

Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Lead 7439-92-1		96h LC50: = 0.44 mg/L (Cyprinus carpio) 96h LC50: = 1.17 mg/L (Oncorhynchus mykiss) 96h LC50: = 1.32 mg/L (Oncorhynchus mykiss)		48h EC50: = 600 μg/L
Sulfuric acid 7664-93-9		96h LC50: > 500 mg/L (Brachydanio rerio)		24h EC50: = 29 mg/L

Persistence and Degradability

No information available.

Bioaccumulation

No information available

Other adverse effects

No information available.



13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR

261).

Contaminated Packaging Do not reuse empty containers.

US EPA Waste Number D008 D002 D004

Chemical name	RCRA - Halogenated Organic Compounds	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
Antimony 7440-36-0				Toxic waste waste number K021 Waste description: Aqueous spent antimony catalyst waste from fluoromethanes production.

California Hazardous Waste Codes 792

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

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

14. TRANSPORT INFORMATION

DOT

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Packing Group III

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8, III

Emergency Response Guide 154

Number

TDG

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Packing Group III

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to TDG.

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8, III

MEX

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794 BATTERIES, WET, FILLED WITH ACID, 8



ICAO

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

IATA

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

IMDG/IMO

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

EmS-No. F-A, S-B

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to

IMDG/IMO

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8, FP 23C

RID

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11

Description UN2794 BATTERIES, WET, FILLED WITH ACID, 8

ADR

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11

Description UN2794 BATTERIES, WET, FILLED WITH ACID, 8

<u>ADN</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11
Special Provisions 295, 598

Description UN2794 BATTERIES, WET, FILLED WITH ACID, 8

Hazard Labels 8 Limited Quantity 1 L

15. REGULATORY INFORMATION

International Inventories

TSCA Complies

DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

<u>SARA 313</u>

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	CAS No	Weight-%	SARA 313 - Threshold Values %
Lead - 7439-92-1	7439-92-1	60 - 100	0.1
Sulfuric acid - 7664-93-9	7664-93-9	10 - 30	1.0
Antimony - 7440-36-0	7440-36-0	1 - 5	1.0

SARA 311/312 Hazard Categories

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

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead 7439-92-1		X	X	
Sulfuric acid 7664-93-9	1000 lb			X
Antimony 7440-36-0		X	X	

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)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Lead 7439-92-1	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Antimony 7440-36-0	5000 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65
Lead - 7439-92-1	Carcinogen
	Developmental
	Female Reproductive
	Male Reproductive
Sulfuric acid - 7664-93-9	Carcinogen
Arsenic - 7440-38-2	Carcinogen

U.S. State Right-to-Know Regulations

.

Chemical name	New Jersey	Massachusetts	Pennsylvania	Rhode Island	Illinois
Lead 7439-92-1	X	X	Χ	Χ	X
Sulfuric acid 7664-93-9	Х	Х	Х	Х	Х
Antimony 7440-36-0	Х	Х	Х	Х	Х
Arsenic 7440-38-2	X	Х	Х	Х	Х



International Regulations

Mexico

National occupational exposure limits

Component	Carcinogen Status	Exposure Limits
Lead	A3	Mexico: TWA= 0.15 mg/m ³
7439-92-1 (60 - 100)		-
Sulfuric acid	A2	Mexico: TWA 1 mg/m ³
7664-93-9 (10 - 30)		
Antimony		Mexico: TWA 0.5 mg/m ³
7440-36-0 (1 - 5)		

A2 - Suspected Human Carcinogen

Mexico - Occupational Exposure Limits - Carcinogens

Canada

WHMIS Hazard Class

Non-controlled

16. OTHER INFORMATION

NFPA Health Hazards 3 Flammability 0 Instability 0 Physical and Chemical Hazards HMIS Health Hazards 0 Flammability 0 Physical Hazard 0 Personal Protection

Prepared By Product Stewardship

23 British American Blvd. Latham, NY 12110 1-800-572-6501

Issuing Date 23-Mar-2016
Revision Date 29-Mar-2016

Revision Note No information available

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



A3 - Confirmed Animal Carcinogen

SAFETY DATA SHEET

Issuing Date 20-Jul-2017

Revision Date 20-Jul-2017

Revision Number 1

NGHS / English



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1. IDENTIFICATION

Product identifier

Product Name LEAD ACID BATTERY WET FILLED WITH ACID

Other means of identification

Product Code(s) 1110599

Recommended use of the chemical and restrictions on use

Recommended Use Lead acid battery

Restrictions on use No information available

Details of the supplier of the safety data sheet

Supplier Identification East Penn Mfg.

Address Deka Rd

Lyon Station PA

19536 US

Telephone Phone:610-682-6361

Fax:610-682-1650

E-mail mgriffith@dekabatteries.com

Emergency telephone number

Company Emergency Phone

610-682-6361

Number

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 3
Skin corrosion/irritation	Category 1



Serious eye damage/eye irritation

Carcinogenicity

Category 1

Reproductive toxicity

Effects on or via lactation

Specific target organ toxicity (repeated exposure)

Corrosive to metals

Category 1

Category 1

Category 1

Category 1

Category 1

Category 1

This is a battery. In case of rupture: the above hazards exist.

Appearance Varies Physical state Solid Odor Odorless

GHS Label elements, including precautionary statements

Danger

Hazard statements

Harmful if swallowed

Toxic if inhaled

Causes severe skin burns and eye damage

May cause cancer

May damage fertility or the unborn child

May cause harm to breast-fed children

Causes damage to organs through prolonged or repeated exposure

May be corrosive to metals



Precautionary Statements - Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Do not breathe dust/fume/gas/mist/vapors/spray

Avoid contact during pregnancy/while nursing

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Use only outdoors or in a well-ventilated area

Keep only in original container

Precautionary Statements - Response

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see supplemental first aid instructions on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Skin

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell



Immediately call a POISON CENTER or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Spill

Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Store in corrosion resistant container with a resistant inner liner

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other information

Very toxic to aquatic life with long lasting effects.

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Not applicable.

Mixture

Chemical name	CAS-No	Percent	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Lead	7439-92-1	70	-	-
Sulfuric acid	7664-93-9	26	-	-
Antimony	7440-36-0	4	-	-

4. FIRST AID MEASURES

First aid measures

General advice

Show this safety data sheet to the doctor in attendance. Immediate medical attention is required. IF exposed or concerned: Get medical advice/attention. First aid is upon rupture of sealed battery.

Inhalation

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 substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Do not breathe dust. Get immediate medical advice/attention.



Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Remove contact lenses, if present and easy to do. Continue rinsing. Keep eye wide open

while rinsing. Do not rub affected area. Get immediate medical advice/attention.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Get immediate medical advice/attention.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth

to an unconscious person. Do NOT induce vomiting. Get immediate medical

advice/attention.

Self-protection of the first aider

Avoid contact with skin, eyes or clothing. Ensure that medical personnel are aware of the

material(s) involved, take precautions to protect themselves and prevent spread of contamination. Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Use personal protective

equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Burning sensation. Coughing and/ or wheezing. Difficulty in breathing.

Indication of any immediate medical attention and special treatment needed

Note to physicians 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.

5. FIRE-FIGHTING MEASURES

surrounding environment.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

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.

Hazardous Combustion Products Carbon oxides.

Explosion Data

Sensitivity to Mechanical Impact None. Sensitivity to Static Discharge None.

Special protective equipment for

fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout

gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal

protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not



breathe dust.

Other Information Refer to protective measures listed in Sections 7 and 8.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. Do not breathe dust. Avoid generation of dust.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Keep out of the reach of children. Store away from other materials. Store locked up.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name		ACGIH T	LV	0:	SHA PEL		NIOSH IDLH
Lead		TWA: 0.05 mg/m ³		TWA: 50 µg	/m³ TWA: 50 µg/m³	IDL	H: 100 mg/m³ IDLH: 100
7439-92-1					Pb		mg/m³ Pb
					.evel: 30 µg/m³	TWA:	0.050 mg/m ³ TWA: 0.050
					29 CFR 1910.1025		mg/m³ Pb
					vel: 30 µg/m³ Pb		
				Poison;See	29 CFR 1910.1025		
Sulfuric acid		TWA: 0.2 mg/m ²			4: 1 mg/m³		IDLH: 15 mg/m ³
7664-93-9		particulate r		(vacated) TWA: 1 mg/m ³			TWA: 1 mg/m ³
Antimony		TWA: 0.5 mg/m ³			mg/m³ TWA: 0.5	IDL	_H: 50 mg/m³ IDLH: 50
7440-36-0		mg/m³ S	Sb		ıg/m³ Sb		mg/m³ Sb
					TWA: 0.5 mg/m ³	TW	A: 0.5 mg/m³ TWA: 0.5
				(vacated) T	WA: 0.5 mg/m ³ Sb		mg/m³ Sb
Chemical name		Alberta	British C	Columbia	Ontario TWAE	V	Quebec
Lead	TV	VA: 0.05 mg/m ³	TWA: 0.0	05 mg/m ³	TWA: 0.05 mg/ı	m³	TWA: 0.05 mg/m ³
7439-92-1							
Sulfuric acid		ΓWA: 1 mg/m³	TWA: 0.	2 mg/m³	TWA: 0.2 mg/n	n ³	TWA: 1 mg/m ³
7664-93-9	S	STEL: 3 mg/m ³					STEL: 3 mg/m ³
Antimony	T'	WA: 0.5 mg/m ³	TWA: 0.	5 mg/m³	TWA: 0.5 mg/n	n ³	TWA: 0.5 mg/m ³
7440-36-0							



Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962

(11th Cir., 1992). See section 15 for national exposure control parameters.

Appropriate engineering controls

Engineering controls Showers

Eyewash stations Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Face protection shield.

Hand protection Wear suitable gloves. Impervious gloves.

Skin and body protection Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron.

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.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Wear suitable

gloves and eye/face protection. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product. Do not

breathe dust. Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state Solid
Appearance Varies
Odor Odorless

ColorNo information availableOdor ThresholdNo information available

<u>Property</u> <u>Values</u> <u>Remarks Method</u>

oH 2

No data available Melting / freezing point None known Boiling point / boiling range No data available None known No data available **Flash Point** None known No data available **Evaporation Rate** None known None known Flammability (solid, gas) No data available Flammability Limit in Air None known

Upper flammability limit No data available

Lower flammability limit No data available

Vapor pressureNo data availableNone knownVapor densityNo data availableNone known

Relative density 1.27

Water Solubility Reacts with water

Solubility(ies) No data available None known

Partition coefficient: n-octanol/waterNA

Autoignition temperatureNo data availableNone knownDecomposition temperatureNo data availableNone knownKinematic viscosityNo data availableNone known



Dynamic viscosity No data available None known

Other Information

Explosive properties No information available **Oxidizing properties** No information available No information available **Softening Point** Molecular Weight No information available No information available **VOC Content (%) Liquid Density** No information available **Bulk Density** No information available Particle Size No information available **Particle Size Distribution** No information available

10. STABILITY AND REACTIVITY

Reactivity No information available.

Chemical stability Stable under normal conditions.

Possibility of Hazardous Reactions None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to avoid Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials Oxidizing agent. Acids. Bases.

Hazardous Decomposition Products Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information Product does not present an acute toxicity hazard based on known or supplied information

In case of rupture:

Inhalation Specific test data for the substance or mixture is not available. Corrosive by inhalation.

(based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs.

Pulmonary edema can be fatal. Toxic by inhalation.

Eye contact Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Corrosive to the eyes and may cause severe damage including blindness.

Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact Specific test data for the substance or mixture is not available. Corrosive. (based on

components). Causes burns.

Ingestion Specific test data for the substance or mixture is not available. Causes burns. (based on

components). Ingestion causes 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.



Information on toxicological effects

Symptoms Redness. Burning. May cause blindness. Coughing and/ or wheezing. Difficulty in

breathing.

Numerical measures of toxicity

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 624.00 mg/kg
ATEmix (inhalation-gas) 4,500.00 mg/L
ATEmix (inhalation-dust/mist) 0.66 mg/L
ATEmix (inhalation-vapor) 11.00 mg/L

Unknown acute toxicity

100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

26 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

0 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric acid	= 2140 mg/kg (Rat)	-	= 510 mg/m ³ (Rat) 2 h
Antimony	= 7 g/kg (Rat)	-	-

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

Skin corrosion/irritation Classification based on data available for ingredients. Causes burns.

Serious eye damage/eye irritation Classification based on data available for ingredients. Risk of serious damage to eyes.

Causes burns.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity Classification based on data available for ingredients. Contains a known or suspected

carcinogen.

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

The table below indicates whether each agency has listed any ingredient as a carolinegen.					
Chemical name	ACGIH	IARC	NTP	OSHA	
Lead 7439-92-1	А3	Group 2A	Reasonably Anticipated	Х	
Sulfuric acid 7664-93-9	A2	Group 1	Known	Х	

Legend

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

NTP (National Toxicology Program)

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 Classification based on data available for ingredients. Contains a known or suspected

reproductive toxin. May cause harm to breastfed babies.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Chemical name	Toxicity to Algae	Toxicity to Fish	Toxicity to	Daphnia Magna (Water
			Microorganisms	Flea)
Lead	-	96h LC50: = 0.44 mg/L	-	48h EC50: = 600 μg/L
		(Cyprinus carpio) 96h		
		LC50: = 1.17 mg/L		
		(Oncorhynchus mykiss)		
		96h LC50: = 1.32 mg/L		
		(Oncorhynchus mykiss)		
Sulfuric acid	-	96h LC50: > 500 mg/L	-	24h EC50: = 29 mg/L
		(Brachydanio rerio)		_

Persistence and Degradability No information available.

Bioaccumulation There is no data for this product.

MobilityNo information available.Other adverse effectsNo information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

products

Dispose of in accordance with local regulations. Dispose of waste in accordance with

environmental legislation.

Contaminated packaging Do not reuse empty containers.

US EPA Waste Number D008 D002

Chemical name	RCRA - Halogenated	RCRA - P Series Wastes	RCRA - F Series Wastes	RCRA - K Series Wastes
	Organic Compounds			
Antimony				Toxic waste
7440-36-0				waste number K021
				Waste description:
				Aqueous spent antimony
				catalyst waste from
				fluoromethanes
				production.



California Hazardous Waste Codes 792

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

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

14. TRANSPORT INFORMATION

DOT

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

Emergency Response Guide 154

Number

<u>TDG</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to TDG.

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

MEX

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

<u>ICAO</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

<u>IATA</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8 ERG Code 8L

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

IMDG/IMO

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8

EmS-No. F-A, S-B

Marine Pollutant This product contains a chemical which is listed as a marine pollutant according to

IMDG/IMO

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8



<u>RID</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

ADR/RID-Labels 8

<u>ADR</u>

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11
Tunnel restriction code (E)

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8, (E)

ADN

UN-No. UN2794

Proper Shipping Name BATTERIES, WET, FILLED WITH ACID

Hazard Class 8
Classification code C11
Special Provisions 295, 598

Description UN2794, BATTERIES, WET, FILLED WITH ACID, 8

Hazard Labels 8 Limited Quantity 1 L

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

Ozone-depleting substances (ODS) Not applicable

Persistent Organic Pollutants Not applicable

Export Notification requirements Not applicable

International Inventories

TSCA

DSL/NDSL

Contact supplier for inventory compliance status.

PICCS

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Contact supplier for inventory compliance status.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

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	CAS-No	Percent	SARA 313 - Threshold Values %
Lead - 7439-92-1	7439-92-1	70	0.1
Sulfuric acid - 7664-93-9	7664-93-9	26	1.0
Antimony - 7440-36-0	7440-36-0	4	1.0

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

CWA (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)

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead 7439-92-1		X	Х	
Sulfuric acid 7664-93-9	1000 lb			X
Antimony 7440-36-0		X	Х	

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)

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Lead 7439-92-1	10 lb		RQ 10 lb final RQ RQ 4.54 kg final RQ
Sulfuric acid 7664-93-9	1000 lb	1000 lb	RQ 1000 lb final RQ RQ 454 kg final RQ
Antimony 7440-36-0	5000 lb 10 lb		RQ 5000 lb final RQ RQ 2270 kg final RQ RQ 10 lb final RQ RQ 4.54 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals.

Chemical name	California Proposition 65		
Lead - 7439-92-1	Carcinogen		
	Developmental		
	Female Reproductive		
	Male Reproductive		
Sulfuric acid - 7664-93-9	Carcinogen		

U.S. State Right-to-Know Regulations



Chemical name	New Jersey	Massachusett	Pennsylvania	Rhode Island	Illinois
		S			
Lead	X	Х	Х	Х	Х
7439-92-1					
Sulfuric acid	X	X	Х	X	Х
7664-93-9					
Antimony	X	Х	Х	Х	Х
7440-36-0					

16. OTHER INFORMATION

NFPA Health hazards 1 Flammability 0 Instability 0 Physical and Chemical

Properties -

HMIS Health hazards 0 Flammability 0 Physical hazards 0 Personal Protection X

Prepared By Product Stewardship

23 British American Blvd. Latham, NY 12110 1-800-572-6501

Issuing Date 20-Jul-2017

Revision Date 20-Jul-2017

Revision Note No information available

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



SAFETY DATA SHEET



1. Identification

Product identifier Lead Acid Battery Wet, Filled With Acid

Other means of identification

Synonyms may include gel/absorbed electrolyte type lead acid batteries

Recommended use Electric storage battery.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

East Penn Manufacturing Company, Inc. Manufacturer/Supplier **Address** 102 Deka Road, Lyon Station PA 19536

Telephone number (610) 682-6361

Contact person East Penn EHS Department

Emergency telephone

number E-mail

USA/Canada: CHEMTREC (800) 424-9300, Outside USA 1 (703) 527-3887

contactus@eastpenn-deka.com

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Category 4 Acute toxicity, oral

> Acute toxicity, inhalation Category 4 Skin corrosion/irritation Category 1A Serious eye damage/eye irritation Category 1 Carcinogenicity Category 1A Reproductive toxicity Category 1A

Reproductive toxicity Effects on or via lactation Specific target organ toxicity, single exposure Category 1 (respiratory system) Specific target organ toxicity, single exposure Category 3 respiratory tract irritation Specific target organ toxicity, repeated Category 1 (respiratory system)

exposure

Hazardous to the aquatic environment, acute Category 1

hazard

Hazardous to the aquatic environment,

long-term hazard

OSHA defined hazards Not classified.

Label elements

Environmental hazards



Signal word Danger

Hazard statement The materials contained in this product may only represent a hazard if the integrity of the cell or battery is compromised; physically, thermally, or electrically abused. The below are the hazards

anticipated under those conditions:

Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause cancer. May damage fertility or the unborn child. May cause harm to breast-fed children. Causes damage to organs (respiratory system). Causes damage to organs (respiratory system) through prolonged or repeated exposure. May cause respiratory irritation. Very toxic to aquatic life with long lasting effects.

Category 1

Lead Acid Battery Wet, Filled With Acid SDS US 1/9 923330 Version #: 03 Revision date: 31-August-2020 Issue date: 19-September-2017

Precautionary statement

Prevention Obtain special instructions before use. Do not handle until all safety precautions have been read

and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not breathe dust/mist/vapors. Do not eat, drink or smoke when using this product. Avoid contact during pregnancy/while nursing. Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid

release to the environment.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all

contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison

center/doctor. Wash contaminated clothing before reuse. Collect spillage.

Storage Store in a well-ventilated place. Keep container tightly closed.

Refer to manufacturer/supplier for information on recovery/recycling. Dispose of **Disposal**

contents/container in accordance with local/regional/national/international regulations.

Hazard(s) not otherwise classified (HNOC)

None known.

Supplemental information In use, may form flammable/explosive vapor-air mixture.

> Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Lead and lead compounds (inorganic)	7439-92-1	43 - 70
Electrolyte (Sulfuric acid)	7664-93-9	20 - 44
Antimony	7440-36-0	3 - 5

Composition comments

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in

percent by volume.

Content composition concentrations will vary with battery type/size. The manufacturer has claimed the exact percentage as trade secret under the OSHA Hazard Communication Standard.

4. First-aid measures

Inhalation Exposure to contents of an open or damaged battery: Move injured person into fresh air and keep

person under observation. Get medical attention if any discomfort continues.

Skin contact Exposure to contents of an open or damaged battery: Immediately flush with plenty of water for at

least 15 minutes while removing contaminated clothing and shoes. Get medical attention if

irritation develops and persists.

Exposure to contents of an open or damaged battery: Flush thoroughly with water for at least 15 Eye contact

minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Get medical

attention if irritation develops and persists.

Exposure to contents of an open or damaged battery: Rinse mouth thoroughly with water. DO NOT Ingestion

induce vomiting because of danger of aspirating liquid into lungs. Get medical attention

immediately.

Most important

symptoms/effects, acute and

delayed

Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. The battery should not be opened or burned. Exposure to the ingredients

contained within or their combustion products could be harmful.

Heavy lead exposure may result in central nervous system damage, encephalopathy and damage

to the blood-forming (hematopoietic) tissues.

Indication of immediate medical attention and special treatment needed

Treat symptomatically.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to

protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical, foam, carbon dioxide, water fog.

Lead Acid Battery Wet, Filled With Acid SDS US 923330 Version #: 03 Revision date: 31-August-2020 Issue date: 19-September-2017

Unsuitable extinguishing

media

Do NOT use water on live electrical circuits.

Specific hazards arising from

the chemical

Batteries evolve flammable hydrogen gas during charging and may increase fire risk. Containers

may explode when heated.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in

the workplace.

Fire fighting

equipment/instructions

Specific methods General fire hazards In case of fire do not breathe fumes. Move container from fire area if it can be done without risk.

Use standard firefighting procedures and consider the hazards of other involved materials.

Like any sealed container, battery cells may rupture when exposed to excessive heat; this could

result in the release of corrosive and flammable materials.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Avoid contact with skin.

Methods and materials for containment and cleaning up Neutralize the spilled material before disposal. Sweep up or vacuum up spillage and collect in suitable container for disposal. Dispose of waste and residues in accordance with local authority

requirements.

Environmental precautions

Prevent runoff from entering drains, sewers, or streams.

7. Handling and storage

Precautions for safe handling

In the event of damage resulting in a leak of exposed materials, avoid contact with contents of an open or damaged cell or battery. Keep away from heat, sparks and open flame. Do not allow conductive material to touch the battery terminals. A dangerous short-circuit may occur and cause battery failure and fire. Pregnant or breastfeeding women must not handle this product.

Value

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Protect containers from damage. Place cardboard

between layers of stacked batteries to avoid damage and short circuits.

8. Exposure controls/personal protection

Occupational exposure limits

Components

Type

Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m3	
US. OSHA Table Z-1 Limits for Air Components	Contaminants (29 CFR 1910. [.] Type	1000) Value	
Antimony (CAS 7440-36-0)	PEL	0.5 mg/m3	
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	PEL	1 mg/m3	
US. ACGIH Threshold Limit Values Components	Туре	Value	Form
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.
Lead and lead compounds (inorganic) (CAS 7439-92-1)	TWA	0.05 mg/m3	
US. NIOSH: Pocket Guide to Chem		Value	
Components	Type		
Antimony (CAS 7440-36-0)	TWA	0.5 mg/m3	
Electrolyte (Sulfuric acid) (CAS 7664-93-9)	TWA	1 mg/m3	

Lead Acid Battery Wet, Filled With Acid

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US. NIOSH: Pocket Guide to Chemical Hazards

 Components
 Type
 Value

 Lead and lead compounds
 TWA
 0.05 mg/m3

(inorganic) (CAS 7439-92-1)

Biological limit values

No biological exposure limits noted for the ingredient(s).

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Lead and lead compounds (inorganic) (CAS 7439-92-1)	200 μg/l	Lead	Blood	*

^{* -} For sampling details, please see the source document.

Appropriate engineering

Provide adequate ventilation. Provide easy access to water supply and eye wash facilities.

controls

Individual protection measures, such as personal protective equipment

Eye/face protection None under normal conditions. Leak from a damaged or opened battery: Wear safety glasses with

side shields (or goggles) and a face shield.

Skin protection

Hand protection None under normal conditions. Leak from a damaged or opened battery: Wear appropriate

chemical resistant gloves. Glove material: Nitrile rubber Layer thickness: 0.152 or 0.381 mm Breakthrough time: 240 or 480 min. Suitable gloves can be recommended by the glove supplier.

Skin protection

Other None under normal conditions. Leak from a damaged or opened battery: Wear appropriate

chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection None under normal conditions.

Thermal hazards When material is heated, wear gloves to protect against thermal burns.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective

equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Sulfuric acid, liquid. Lead, solid.

Color Not available.

Odor Odorless.

Odor threshold Not available.

pH < 1

Melting point/freezing point Not available.

Initial boiling point and boiling 235 - 240 °F (112.8 - 115.6 °C) (Sulfuric acid)

range

Flash point Below room temperature (as hydrogen gas).

Evaporation rate < 1 (n-BuAc=1)

Flammability (solid, gas)

Upper/lower flammability or explosive limits

Flammability limit - lower 4 % (Hydrogen)

(%)

Flammability limit - upper 74 % (Hydrogen)

(%)

Vapor pressure 10 mm Hg Vapor density > 1 (Air=1) Relative density 1.27 - 1.33

Solubility(ies)

Solubility (water) 100 % (Sulfuric acid)

Partition coefficient (n-octanol/water)

Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive. **Oxidizing properties** Not oxidizing.

10. Stability and reactivity

ReactivityThe product is non-reactive under normal conditions of use, storage and transport.

Chemical stability Stable at normal conditions.

Possibility of hazardous

reactions

Will not occur.

Conditions to avoid Overcharging. Ignition sources.

Incompatible materials Strong bases. Combustible organic materials. Reducing agents. Finely divided metals. Strong

oxidizers. Water.

Hazardous decomposition

products

Sulfur dioxide. Sulfur trioxide. Carbon monoxide. Sulfuric acid. Hydrogen.

11. Toxicological information

Information on likely routes of exposure

Inhalation Exposure to contents of an open or damaged battery: Harmful if inhaled. Dust may irritate

respiratory system. Difficulty in breathing. Frequent inhalation of dust over a long period of time

increases the risk of developing lung diseases.

Skin contact Exposure to contents of an open or damaged battery: Causes skin burns.

Eye contact Exposure to contents of an open or damaged battery: Causes severe eye burns.

Ingestion Exposure to contents of an open or damaged battery: Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Under normal conditions of processing and use, exposure to the chemical constituents in this product is unlikely. The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful. Heavy lead exposure may result

in central nervous system damage, encephalopathy and damage to the blood-forming

(hematopoietic) tissues.

Information on toxicological effects

Acute toxicity Exposure to contents of an open or damaged battery: Harmful if inhaled or swallowed.

Components Species Test Results

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

<u>Acute</u> Oral

LD50 Rat 2140 mg/kg

Skin corrosion/irritation Exposure to contents of an open or damaged battery: Causes severe skin burns.

Serious eye damage/eye

irritation

Exposure to contents of an open or damaged battery: Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization No data available.

Skin sensitization No data available.

Germ cell mutagenicity No data available.

Carcinogenicity The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid

mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This

classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid

solutions.

IARC Monographs. Overall Evaluation of Carcinogenicity

Electrolyte (Sulfuric acid) (CAS 7664-93-9) 1 Carcinogenic to humans.

Lead and lead compounds (inorganic) (CAS 7439-92-1) 2B Possibly carcinogenic to humans.

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NTP Report on Carcinogens

Electrolyte (Sulfuric acid) (CAS 7664-93-9) Known To Be Human Carcinogen.

Lead and lead compounds (inorganic) (CAS 7439-92-1) Reasonably Anticipated to be a Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity None under normal conditions. Exposure to contents of an open or damaged battery: May cause

harm to breastfed babies. May damage fertility or the unborn child.

Specific target organ toxicity -

single exposure

None under normal conditions. Exposure to contents of an open or damaged battery: Causes

damage to organs (respiratory system). May cause respiratory irritation.

Specific target organ toxicity -

repeated exposure

None under normal conditions. Exposure to contents of an open or damaged battery: Causes

damage to organs (respiratory system) through prolonged or repeated exposure.

Due to the physical form of the product it is not an aspiration hazard. Aspiration hazard

Exposure to contents of an open or damaged battery: Heavy lead exposure may result in central **Chronic effects**

nervous system damage, encephalopathy and damage to the blood-forming (hematopoietic)

tissues. Chronic inhalation of sulfuric acid mist may increase the risk of lung cancer.

12. Ecological information

Ecotoxicity None under normal conditions. Exposure to contents of an open or damaged battery: Very toxic to

aquatic life with long lasting effects.

Components **Species Test Results**

Lead and lead compounds (inorganic) (CAS 7439-92-1)

LC50 Rainbow trout, donaldson trout 1.17 mg/l, 96 Hours

(Oncorhynhus mykiss)

The degradation half-life of the product is not known. Lead and its compounds are highly persistent Persistence and degradability

Bioaccumulative potential Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants, but very little

bioaccumulation occurs through the food chain.

Mobility in soil If the product enters soil, one or more constituents will or may be mobile and may contaminate

groundwater.

Mobility in general The product is insoluble in water and will spread on water surfaces.

Other adverse effects None known

13. Disposal considerations

Recycle the batteries, as the primary disposal method. Neutralize electrolyte/sulfuric acid. Avoid **Disposal instructions**

discharge into water courses or onto the ground. Do not contaminate ponds, waterways or ditches

with chemical or used container.

Local disposal regulations

Empty containers should be taken to an approved waste handling site for recycling or disposal.

Hazardous waste code

RCRA: Spent lead-acid batteries are not regulated as hazardous waste when recycled.

Depending upon circumstances, the following waste codes may apply:

Spilled electrolyte/Sulfuric acid. D002: Corrosive waste

Waste from residues / unused

products

Avoid discharge into water courses or onto the ground.

Contaminated packaging Since emptied containers retain product residue, follow label warnings even after container is

emptied.

14. Transport information

DOT

UN2794 **UN** number

UN proper shipping name

Batteries, wet, filled with acid, electric storage

Transport hazard class(es)

Class 8 Subsidiary risk 8 Label(s) Packing group

Environmental hazards

Marine pollutant Nο

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Packaging exceptions 159 Packaging non bulk 159

Lead Acid Battery Wet, Filled With Acid 6/9

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Packaging bulk 159

IATA

UN number UN2794

UN proper shipping name

Transport hazard class(es)

Batteries, wet, filled with acid electric storage

Class 8
Subsidiary risk Packing group Environmental hazards No
ERG Code 8L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Packing Instruction: 870

IMDG

UN number UN2794

UN proper shipping name

BATTERIES, WET, FILLED WITH ACID electric storage

Transport hazard class(es)
Class

Subsidiary risk Packing group -

Environmental hazards

Marine pollutant No EmS F-A, S-B

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Packing Instruction: P801

Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

Hazardous Chemical Reporting Requirements apply when an Extremely Hazardous Substance is present at a facility in an amount equal to or exceeding 500 pounds or the Threshold Planning

Quantity, whichever is lower per 40CFR370.10(a)(1)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Lead and lead compounds (inorganic)

8

(CAS 7439-92-1)

0.1 % Annual Export Notification required.

CERCLA Hazardous Substance List (40 CFR 302.4)

Antimony (CAS 7440-36-0)

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Lead and lead compounds (inorganic)

Listed.

Listed.

(CAS 7439-92-1)

SARA 304 Emergency release notification

SULFURIC ACID (CAS 7664-93-9) 1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Lead and lead compounds (inorganic) Reproductive toxicity

(CAS 7439-92-1)

Central nervous system

Kidney Blood Acute toxicity

Toxic Substances Control Act (TSCA)

All components of the mixture on the TSCA 8(b) inventory are designated

"active".

Lead Acid Battery Wet, Filled With Acid

SDS US

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)	
Electrolyte (Sulfuric	7664-93-9	1000	1000			

acid)

SARA 311/312 Hazardous

Yes

chemical

Classified hazard categories

Acute toxicity (any route of exposure)

Skin corrosion or irritation

Serious eye damage or eye irritation

Carcinogenicity
Reproductive toxicity

Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.	
Antimony	7440-36-0	3 - 5	
Electrolyte (Sulfuric acid)	7664-93-9	20 - 44	
Lead and lead compounds (inorganic)	7439-92-1	43 - 70	

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Antimony (CAS 7440-36-0)

Lead and lead compounds (inorganic) (CAS 7439-92-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Safe Drinking Water Act

Contains component(s) regulated under the Safe Drinking Water Act.

6552

(SDWA)

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

20 %WV

DEA Exempt Chemical Mixtures Code Number

Electrolyte (Sulfuric acid) (CAS 7664-93-9) 6552

US state regulations

US. Massachusetts RTK - Substance List

Antimony (CAS 7440-36-0)

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Lead and lead compounds (inorganic) (CAS 7439-92-1)

US. New Jersey Worker and Community Right-to-Know Act

Antimony (CAS 7440-36-0)

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Lead and lead compounds (inorganic) (CAS 7439-92-1)

US. Pennsylvania Worker and Community Right-to-Know Law

Antimony (CAS 7440-36-0)

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Lead and lead compounds (inorganic) (CAS 7439-92-1)

US. Rhode Island RTK

Antimony (CAS 7440-36-0)

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Lead and lead compounds (inorganic) (CAS 7439-92-1)

California Proposition 65



WARNING: Cancer and Reproductive Harm. www.P65warnings.ca.gov

or

PROPOSITION 65 WARNING: Battery posts, terminals and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Batteries also contain other chemicals known to the State of California to cause cancer.

WASH HANDS AFTER HANDLING.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Arsenic (CAS 7440-38-2) Listed: February 27, 1987 Electrolyte (Sulfuric acid) (CAS 7664-93-9) Listed: March 14, 2003 Lead and lead compounds (inorganic) Listed: October 1, 1992

(CAS 7439-92-1)

California Proposition 65 - CRT: Listed date/Developmental toxin

Lead and lead compounds (inorganic) Listed: February 27, 1987

(CAS 7439-92-1)

California Proposition 65 - CRT: Listed date/Female reproductive toxin

Lead and lead compounds (inorganic) Listed: February 27, 1987

(CAS 7439-92-1)

California Proposition 65 - CRT: Listed date/Male reproductive toxin

Lead and lead compounds (inorganic) Listed: February 27, 1987

(CAS 7439-92-1)

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Antimony (CAS 7440-36-0)

Electrolyte (Sulfuric acid) (CAS 7664-93-9)

Lead and lead compounds (inorganic) (CAS 7439-92-1)

Inventory name

International Inventories

Philippines

Country(s) or region

Australia Australian Inventory of Chemical Substances (AICS) Yes Canada Domestic Substances List (DSL) Yes Canada Non-Domestic Substances List (NDSL) No Yes China Inventory of Existing Chemical Substances in China (IECSC) Europe European Inventory of Existing Commercial Chemical No Substances (EINECS) European List of Notified Chemical Substances (ELINCS) Europe No Japan Inventory of Existing and New Chemical Substances (ENCS) No Korea Existing Chemicals List (ECL) Yes New Zealand New Zealand Inventory Yes

Philippine Inventory of Chemicals and Chemical Substances

(PICCS)

Taiwan Taiwan Chemical Substance Inventory (TCSI) Yes United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory Yes

16. Other information, including date of preparation or last revision

19-September-2017 Issue date Revision date 31-August-2020

Version # 03

LC50: Lethal Concentration 50%. List of abbreviations

LD50: Lethal Dose 50%.

IARC Monographs. Overall Evaluation of Carcinogenicity References

Registry of Toxic Effects of Chemical Substances (RTECS)

Disclaimer EastPenn cannot anticipate all conditions under which this information and its product, or the

products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available. The

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protection of the environment.

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On inventory (yes/no)*

Yes

^{*}A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).