

Environmental Hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Lead	7439-92-1	40-70
Lead peroxide	1309-60-0	15-40
Sulfuric acid	7664-93-9	5-10
Glass, oxide	65997-17-3	1 - 5

4. FIRST AID MEASURES

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

5. FIRE-FIGHTING MEASURES

Flammable Properties	Not flammable.
Flash Point	Not determined.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Uniform Fire Code	<ul style="list-style-type: none"> • Corrosive: Acid-Liquid • Toxic: Solid
Hazardous Combustion Products	Hazardous metal fumes and oxides.
Explosion Data	
Sensitivity to Mechanical Impact	No.
Sensitivity to Static Discharge	No.
Specific Hazards Arising from the Chemical	The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.

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.

NFPA **Health Hazard 3** **Flammability 0** **Stability 2** **Physical and Chemical Hazards -**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Do not get in eyes, on skin, or on clothing.
Environmental Precautions	Refer to protective measures listed in Sections 7 and 8.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	In case of rupture: Use personal protective equipment. Dam up. Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Clean contaminated surface thoroughly.
Other Information	Refer to protective measures listed in Sections 7 and 8.

7. HANDLING AND STORAGE

Handling	In case of rupture: Wear personal protective equipment. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Lead 7439-92-1	TWA: 0.05 mg/m ³	TWA: 50 µg/m ³ Action Level: 30 µg/m ³ Poison, See 29 CFR 1910.1025	IDLH: 100 mg/m ³ TWA: 0.050 mg/m ³
Lead peroxide 1309-60-0	TWA: 0.05 mg/m ³ Pb	TWA: 50 µg/m ³ Pb Action Level: 30 µg/m ³ Pb Poison, See 29 CFR 1910.1025	IDLH: 100 mg/m ³ Pb TWA: 0.050 mg/m ³ Pb
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic fraction	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³
Glass, oxide 65997-17-3	TWA: 1 fiber/cm ³ respirable fibers: length >5 µm, aspect ratio >=3:1, as determined by the membrane filter method at 400-450X magnification [4-mm objective], using phase-contrast illumination TWA: 5 mg/m ³ inhalable fraction		

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

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection

Tightly fitting safety goggles.

Skin and Body Protection

Wear protective gloves/clothing.

Respiratory Protection

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

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Black.	Odor	Acidic.
Odor Threshold	No information available	Physical State	Solid containing liquid. Solid
pH	No information available ¹⁻²	Autoignition Temperature	No information available
Flash Point	No information available.	Boiling Point/Range	235°C / 455°F
Decomposition Temperature	No information available	Explosion Limits	No information available
Melting Point/Range	No information available	Solubility	No information available
Flammability Limits in Air	No information available	Vapor Pressure	No data available
Water Solubility	Immiscible in water	Partition Coefficient: n-octanol/water	

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information	In case of rupture:
LD50 Oral VALUE	7088.444 mg/kg (rat) estimated
LC50 Inhalation (DUST) VALUE	3.3786 mg/L (mist) (dust) mg/m ³ estimated
Eye Contact	Irritating to eyes.
Skin Contact	Irritating to skin.

Chronic Toxicity

Chronic Toxicity	Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Avoid repeated exposure.
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Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Lead	A3	Group 2A	Reasonably Anticipated	X
Lead peroxide	A3	Group 2A	Reasonably Anticipated	X
Sulfuric acid	A2	Group 1	Known	X
Glass, oxide		Group 3		

ACGIH: (American Conference of Governmental Industrial Hygienists)

A2 - Suspected Human Carcinogen

A3 - Animal Carcinogen

IARC: (International Agency for Research on Cancer)

Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 3 - Not Classifiable as to Carcinogenicity in Humans

NTP: (National Toxicity Program)

Known - Known Carcinogen

Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen

OSHA: (Occupational Safety & Health Administration)

X - Present

Reproductive Toxicity	Product is or contains a chemical which is a known or suspected reproductive hazard.
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Developmental Toxicity	Contains ingredients that have suspected developmental hazards
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Target Organ Effects	Blood. Reproductive system. Damage to fetus possible Central nervous system (CNS). Eyes. Gastrointestinal tract (GI). Gingival Tissue. Kidney. Respiratory system. Skin. Teeth.
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12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Lead		LC50: 0.44 mg/L (96 h semi-static) <i>Cyprinus carpio</i> LC50: 1.17 mg/L (96 h flow-through) <i>Oncorhynchus mykiss</i> LC50: 1.32 mg/L (96 h static) <i>Oncorhynchus mykiss</i>		EC50: 600 µg/L (48 h) water flea
Sulfuric acid		LC50: > 500 mg/L (96 h static) <i>Brachydanio rerio</i>		EC50: 29 mg/L (24 h) <i>Daphnia magna</i>

13. DISPOSAL CONSIDERATIONS

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

Contaminated Packaging Do not re-use empty containers.

US EPA Waste Number D002
D008

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Lead - 7439-92-1	(hazardous constituent - no waste number)	Included in waste streams: F035, F037, F038, F039, K002, K003, K005, K046, K048, K049, K051, K052, K061, K062, K064, K065, K066, K069, K086, K100, K176	= 5.0 mg/L regulatory level	

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 EHW	California Carc	California Hazardous Waste	California Waste - Part 2
Lead			Toxic	TCLP (for CA Toxicity): 5.0 mg/L
Lead peroxide			Toxic	STLC (for PBTs): 5.0 mg/L TTLC (for PBTs): 1000 mg/kg
Sulfuric acid			Toxic Corrosive	

14. TRANSPORT INFORMATION

DOT NOT REGULATED

TDG Not regulated

MEX Not regulated

ICAO Not regulated

14. TRANSPORT INFORMATION

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL Not determined

U.S. Federal Regulations

SARA 313

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

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Lead	7439-92-1	40-70	0.1
Lead peroxide	1309-60-0	15-40	0.1
Sulfuric acid	7664-93-9	5-10	1.0

SARA 311/312 Hazard Categories

Acute Health Hazard Yes
 Chronic Health Hazard Yes
 Fire Hazard No
 Sudden Release of Pressure Hazard No
 Reactive Hazard No

Clean Water Act

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

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Lead		X	X	
Lead peroxide		X		
Sulfuric acid	1000 lb			X

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

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

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Lead	7439-92-1	40-70				
Lead peroxide	1309-60-0	15-40				
Glass, oxide	65997-17-3	1 - 5	Present (includes mineral fiber emissions from facilities manufacturing or processing glass, rock, or slag fibers [or other mineral derived fibers] of average diameter 1 µm or less)			

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
Lead	10 lb	
Sulfuric acid	1000 lb	1000 lb

U.S. State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Lead peroxide	1309-60-0	Carcinogen Developmental Female Reproductive Male Reproductive
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	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Lead peroxide	X	X	X	X	X
Lead	X	X	X	X	X
Tin	X	X	X		
Sulfuric acid	X	X	X	X	X

International Regulations**Mexico - Grade**

Minimum risk, Grade 0

Chemical Name	Carcinogen Status	Exposure Limits
Lead peroxide	A3	Mexico: TWA 0.15 mg/m ³
Lead	A3	Mexico: TWA= 0.15 mg/m ³
Tin		Mexico: TWA 2 mg/m ³ Mexico: STEL 4 mg/m ³
Sulfuric acid	A2	Mexico: TWA 1 mg/m ³

Canada

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

WHMIS Hazard Class

D2A Very toxic materials

E Corrosive material

D1B Toxic materials



Chemical Name	NPRI
Lead	X
Sulfuric acid	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

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Revision Note No information available

General Disclaimer

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

End of Safety Data Sheet

SAFETY DATA SHEET

Issuing Date No data available

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Revision Number 1

NGHS / English



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1. IDENTIFICATION

Product identifier

Product Name LEAD ACID BATTERY

Other means of identification

Product Code(s) 1444810

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 Hang zhou Ruiyun electronics Co.,Ltd.

Address 530# Xingguo Road, Donghu Street, Yuhang District, Hangzhou City, Zhejiang Province
3# Buliding, Jin Hengde auto parts City, Yuhang District, Hangzhou City
Hangzhou
Zhejiang Province
31

Telephone Phone:571-891-80787

E-mail 229336071@qq.com

Emergency telephone number

Company Emergency Phone Number 139-898-81515

2. HAZARDS IDENTIFICATION

Classification

Acute toxicity - Oral	Category 4
Acute toxicity - Inhalation (Gases)	Category 4
Acute toxicity - Inhalation (Vapors)	Category 4
Acute toxicity - Inhalation (Dusts/Mists)	Category 2
Skin corrosion/irritation	Category 1 Sub-category A



Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 1A
Reproductive toxicity	Category 1A
Effects on or via lactation	Yes
Specific target organ toxicity (repeated exposure)	Category 1

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

Appearance No information available

Physical state Solid

Odor No information available

GHS Label elements, including precautionary statements

Danger

Hazard statements

Harmful if swallowed

Fatal 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



Precautionary Statements - Prevention

Obtain special instructions before use

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

Wear protective gloves/protective clothing/eye protection/face protection

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

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

Wear respiratory protection

Precautionary Statements - Response

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

Immediately call a POISON CENTER or doctor

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

Skin

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

Wash contaminated clothing before reuse

Inhalation

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Immediately call a POISON CENTER or doctor

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor 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

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
 10 % 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
 27 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
 27 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
 10 % 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.	Weight-%	Hazardous Material Information Review Act registry number (HMIRA registry #)	Date HMIRA filed and date exemption granted (if applicable)
Lead	7439-92-1	73	-	-
Sulfuric acid	7664-93-9	17	-	-

4. FIRST AID MEASURES

First aid measures**General advice**

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

Inhalation

If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. 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. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get immediate medical advice/attention.

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. 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

Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.



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. 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. Avoid contact with skin, eyes or clothing.

Most important symptoms and effects, both acute and delayed

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

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

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the 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 Attention! Corrosive material. Ensure adequate ventilation. Avoid contact with skin, eyes or clothing. Avoid generation of dust. Do not breathe dust. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

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. Do not breathe dust. Avoid generation of dust. 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.

Conditions for safe storage, including any incompatibilities

Storage Conditions

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH	
Lead 7439-92-1	TWA: 0.05 mg/m ³	TWA: 50 µg/m ³ TWA: 50 µg/m ³ Pb Action Level: 30 µg/m ³ Poison; See 29 CFR 1910.1025 Action Level: 30 µg/m ³ Pb Poison; See 29 CFR 1910.1025	IDLH: 100 mg/m ³ TWA: 0.050 mg/m ³	
Sulfuric acid 7664-93-9	TWA: 0.2 mg/m ³ thoracic particulate matter	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 15 mg/m ³ TWA: 1 mg/m ³	
Chemical name	Alberta	British Columbia	Ontario TWAEV	Quebec
Lead 7439-92-1	TWA: 0.05 mg/m ³	TWA: 0.05 mg/m ³	TWA: 0.05 mg/m ³	TWA: 0.05 mg/m ³
Sulfuric acid 7664-93-9	TWA: 1 mg/m ³ STEL: 3 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.2 mg/m ³	TWA: 1 mg/m ³ STEL: 3 mg/m ³

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

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.



General hygiene considerations Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not breathe dust. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. 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. Remove and wash contaminated clothing and gloves, including the inside, before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Physical state	Solid
Appearance	No information available
Odor	No information available
Color	No information available
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks Method</u>
pH	2	None known
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		None known
Upper flammability limit	No data available	
Lower flammability limit	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water Solubility	Insoluble in water	
Solubility(ies)	No data available	None known
Partition coefficient: n-octanol/water	0	
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
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	Excessive heat. Exposure to air or moisture over prolonged periods.
Incompatible materials	Acids. Bases. Oxidizing agent.
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. Fatal if inhaled. (based on components). Corrosive by inhalation. 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.
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. Harmful if swallowed. 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	Coughing and/ or wheezing. Difficulty in breathing. Redness. Burning. May cause blindness.
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Numerical measures of toxicity

Acute Toxicity

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

ATEmix (oral)	650.00 mg/kg
ATEmix (inhalation-gas)	4,500.00 mg/L
ATEmix (inhalation-dust/mist)	0.12 mg/L
ATEmix (inhalation-vapor)	11.00 mg/L

Unknown acute toxicity	100 % of the mixture consists of ingredient(s) of unknown toxicity
	10 % 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
	27 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
	27 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
	10 % 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)	-	85 - 103 mg/m ³ (Rat) 1 h

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.

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	X

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 Microorganisms	Daphnia Magna (Water Flea)
Lead	-	96h LC50: = 1.17 mg/L (Oncorhynchus mykiss) 96h LC50: = 1.32 mg/L	-	48h EC50: = 600 µg/L



		(Oncorhynchus mykiss) 96h LC50: = 0.44 mg/L (Cyprinus carpio)		
Sulfuric acid	-	96h LC50: > 500 mg/L (Brachydanio rerio)	-	24h EC50: = 29 mg/L

Persistence and Degradability No information available.

Bioaccumulation There is no data for this product.

Mobility No information available.

Other adverse effects No 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

California 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

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 Number 154

TDG

UN-No. UN2794
Proper Shipping Name BATTERIES, WET, FILLED WITH ACID
Hazard Class 8
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
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
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
Description	UN2794, BATTERIES, WET, FILLED WITH ACID, 8, MARINE POLLUTANT
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, ENVIRONMENTALLY HAZARDOUS
ADR/RID-Labels	8
ADR	
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), ENVIRONMENTALLY HAZARDOUS
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, ENVIRONMENTALLY HAZARDOUS
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	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	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.	Weight-%	SARA 313 - Threshold Values %
Lead - 7439-92-1	7439-92-1	73	0.1
Sulfuric acid - 7664-93-9	7664-93-9	17	1.0

SARA 311/312 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. Under the amended regulations at 40 CFR 370, EPCRA 311/312 Tier II reporting for the 2017 calendar year will need to be consistent with updated hazard classifications.

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

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

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	Massachusetts	Pennsylvania	Rhode Island	Illinois
Lead 7439-92-1	X	X	X	X	X
Sulfuric acid 7664-93-9	X	X	X	X	X

16. OTHER INFORMATION

NFPA	Health hazards 1	Flammability 0	Instability 0	Physical and Chemical Properties - Personal Protection X
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	

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Latham, NY 12110
1-800-572-6501

Revision Date 26-Mar-2018

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

