

A200	A300	A400	A500
A600	Gassing	Charging	Shipping
HazMat MSDS1	HazMat MSDS2	Prevailer/Gel-Tech	AGM types

This data are believed to be current but is presented here only as a broad indication.

For MSDS for a specific Battery product, you must rely ONLY on the Manufacturers current MSDS , a copy of which should be obtained from your Battery product supplier.

-- Material Safety Data Sheet --

**Valve Regulated Lead Acid Battery  
" Battery Non-Spillable 49 CFR 173.195 (d)"**

**SECTION I**

<b>Manufacturer's Name:</b> East Penn Manufacturing Co. Inc. Lyon Station, PA 19536	<b>Date:</b> May 2000. Revised January 2007 <b>Trade name.</b> Gell: Absorbed Electrolyte, sealed valve regulated Non-Spillable Battery
<b>Emergency Telephone #:</b> CHEMTREC: 800-424-9300, in Washington DC or outside continental US call 202-483-7616	<b>Distributed By:</b> M & G Inc 2415 SW 3rd Ave; Ft. Lauderdale FL 33315. Tel USA 954 525 5557

**SECTION II**

**HAZARDOUS INGREDIENTS / IDENTITY INFORMATION**

Hazardous Components Specific Chemical Identity (Common Name (s).)	OSHA PEL	ACGIH TLV	Range % Percent by weight	Average
Lead, CAS #7439921	0.05mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	60-75%	67%
Sulfuric Acid, CAS #7664939	1.00 mg/m <sup>3</sup>	1.00 mg/m <sup>3</sup>	5-15%	10%
Antimony, CAS #74403360	0.50 mg/m <sup>3</sup>	0.50 mg/m <sup>3</sup>	0-0.1%	<0.1%

Arsenic, CAS #7440382	0.01 mg/m <sup>3</sup>	0.01 mg/m <sup>3</sup>	0-0.1%	<0.01%
Polypropylene CAS#9003070	n/a	n/a	2-10%	4%
Calcium, CAS#7440702	1.0 mg/m <sup>3</sup>	1.0 mg/m <sup>3</sup>	0-0.1%	<0.1%
Tin, CAS #7440702	2.0 mg/m <sup>3</sup>	2.0 mg/m <sup>3</sup>	0-0.1%	<0.1%

### SECTION III

#### PHYSICAL/CHEMICAL CHARACTERISTICS

<p><b>Electrolyte. (Sulfuric Acid)</b>  <b>Appearance and Odor:</b> Clear Odorless, colorless liquid.  <b>Boiling Point:</b> 235-240°F  <b>Evaporation Rate (Butyl Acetate=1):</b> less than 1.0  <b>Melting Point:</b> N/A</p>	<p><b>Solubility in Water:</b> 100%  <b>Specific Gravity (H<sub>2</sub>O=1):</b>1.270 -1.330  <b>Vapor Density (AIR=1):</b>Greater than 1.  <b>Vapor Pressure (mm Hg):</b> 10</p>
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### Section IV

#### FIRE AND EXPLOSION HAZARD DATA

<p><b>Flash Point (Method Used):</b> non-flammable</p>	<p><b>Flammable Limit:</b> <a href="#">*hydrogen gas</a></p>
<p><b>Extinguishing Media:</b> Class ABC extinguisher, CO<sub>2</sub> and/or Halon</p>	<p><b>LEL:</b> 4%    <b>UEL:</b> 74%</p>
<p><b>Note:</b> CO<sub>2</sub> may be used, but not directly on the cell. The thermal shock may cause cracking of the battery case and/or cases.  <b>* Hydrogen gas may be generated during battery charging.</b></p>	
<p><b>Special Fire Fighting Procedures:</b> Cool exterior of battery if exposed to fire to prevent rupture. The acid mist and vapors in a fire situation are corrosive. Wear special respiratory protection (SCBA) and clothing.</p>	
<p><b>Unusual Fire and Explosion Hazards:</b> *When overcharging this battery produces <a href="#">hydrogen gas</a>, which may explode if ignited. Use adequate ventilation, avoid open flames, sparks, or other sources of ignition near battery.</p>	

### SECTION V REACTIVITY DATA

<p><b>Stability:</b> Stable</p>
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**Condition to Avoid:** Prolonged overcharging, sources of ignition.

Cases decompose at 160-410° C (322-770° F)

**Incompatibility (Materials to Avoid):**

**Sulfuric Acid:** Contact with combustibles and organic materials may cause fire and explosion Also reacts violently with strong reducing agents, metals, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas.

**Hazardous Decomposition of By-Products:**

**Sulfuric Acid** Excessive overcharging or fire may create Sulfur Trioxide , carbon monoxide, sulfuric acid mist, sulfur dioxide and hydrogen.

**Lead Compounds:** Contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

**Case Material:**

**Polypropylene.** Combustion can produce carbon dioxide (CO<sub>2</sub>) and Carbon Monoxide (CO).

Hazardous Decomposition of By-Products:

**Sulfuric Acid** Excessive overcharging or fire may create Sulfur Trioxide , carbon monoxide, sulfuric acid mist, sulfur dioxide and hydrogen.

**Lead Compounds:** Contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

**Case Material:**

**Polypropylene.** Combustion can produce carbon dioxide (CO<sub>2</sub>) and Carbon Monoxide (CO).

Hazardous Decomposition of By-Products:

**Sulfuric Acid** Excessive overcharging or fire may create Sulfur Trioxide , carbon monoxide, sulfuric acid mist, sulfur dioxide and hydrogen.

**Lead Compounds:** Contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

**Case Material:**

**Polypropylene.** Combustion can produce carbon dioxide (CO<sub>2</sub>) and Carbon Monoxide (CO).

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## SECTION VI

### HEALTH HAZARD DATA (Sulfuric Acid)

**\*\*NOT APPLICABLE TO NON - SPILLABLE SVR BATTERIES\*\***

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**Route(s) of Entry:** Not Applicable under normal use.

**Carcinogenicity:**

**Sulfuric Acid;** The International Agency for research on cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product such as overcharging, may result in the generation of sulfuric acid mist.

**Lead Compounds.** Lead is listed as a 2B carcinogen, likely in animals in extreme doses. Proof of carcinogenicity in humans is lacking at present.

**Arsenic:** Listed by National Toxicology Program (NTP), IARC, OSHA, and NIOSH as a carcinogen only after prolonged exposure at high levels.

**Signs and Symptoms of Exposure:** Avoid contact with absorbed electrolyte (sulfuric acid) may cause irritation of eyes, nose and throat. Contact with eyes and skin causes irritation and skin burns. Absorbed electrolyte is corrosive.

**Medical Condition Generally Aggravated by Exposure:** Pregnant women and children must be protected from lead exposure.

**Health Hazards (Acute and Chronic):** Do not open battery, avoid contact with internal components. Internal components include lead and absorbed electrolyte. Electrolyte is corrosive and contact may cause skin irritation and chemical burns.

**Emergency and First Aid Procedures:** (Contact with internal components if battery is opened)

1. Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention if necessary.  
Eye wash and emergency shower must be available.
2. If swallowed, give large volumes of water. **DO NOT** induce vomiting, and obtain medical treatment.

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## SECTION VII

### PRECAUTIONS FOR SAFE HANDLING AND USE

**\*\*NOT APPLICABLE TO NON-SPILLABLE SVR BATTERIES\*\***

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**Steps to be Taken in Case Material is Released or Spilled:** Electrolyte material is corrosive. Contains sulfuric acid. Neutralize any spilled materials. reference 1996 North American Emergency Response Guidebook, # 154.

**Waste Disposal Method:** Lead-acid batteries are completely recyclable. For information on returning Lead acid batteries for recycling, call (954) 525-5557 or e'mail [sales@mgbattery.com](mailto:sales@mgbattery.com). Disposal of lead acid batteries; Only in accordance with local, State or applicable Federal regulations.

**Precautions to be Taken in Handling and Storing:** Store away from reactive material as defined in Section V, Reactivity Data. Place cardboard between layers of stacked batteries to avoid damage or short circuit. Do not allow metallic materials to simultaneously contact both battery terminals.

**Other Precautions:** If battery case is broken, avoid direct contact with internal components. Keep away from ignition sources during charging

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## SECTION VIII

### CONTROL MEASURES

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**Respiratory Protection (Specific Type):** N/A

**Ventilation:** Must be provided when charging in an enclosed area.

**Protective Gloves:** Recommended

**Eye Protection:** Recommended

**Other Protective Clothing or Equipment:** N/A

**Work / Hygienic Practices:** Good personal hygiene and work practices are recommended.

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**SECTION IX  
OTHER REGULATORY INFORMATION**  
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NFPA Hazard Rating	Sulphuric acid	lead
Health (Blue)	3	3
Flammability (Red)	0	0
Reactivity (Yellow)	2	0

NOTE. Sulfuric Acid is water-reactive if concentrated.

**US DOT:** The Non-Spillable lead acid battery complies with the provisions listed in 49CFR173.159(d) therefore must not be marked with an identification number such as UN2800, or a hazard label such as corrosive. Also having passed IATA/ICAO special provision A67, these batteries are not subject to the air dangerous goods regulations.

**RCRA:** Spent lead-acid batteries are not regulated as hazardous waste when recycled. Spilled sulfuric acid is a characteristic hazardous waste, EPA hazardous waste number D002 (corrosivity).

**CERCLA: (Superfund) and EPCRA Emergency Planning And Community Right To Know ACT)**

- a) Reportable quantity (RQ) for spilled 100% sulfuric acid is 1000lbs.
- b) Sulfuric acid is a listed "Extremely Hazardous Substance" under EPCRA with a threshold Planning Quantity (TPQ) of 1000lbs.
- c)

**California Prop 65:** This product contains chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

This information is accurate to the best of East Penn Mfg Co's knowledge or obtained from sources believed by East Penn to be accurate.

**Before using any product read all warnings and directions on the label.**

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**Older MSDS Forms - Archival only!**

**-- Material Safety Data Sheet --**

**BATTERY SEALED NON-SPILLABLE**

**Item 60682, DOT 173.159**

**Also known as Sealed Valve Regulated (SVR) Type Batteries**

**SECTION I**

<b>Manufacturer's Name:</b> East Penn Manufacturing Co. Inc.	<b>Date Prepared:</b> Revised July 2000
<b>Emergency Telephone #:</b> CHEMTREC: 800-424-9300, in Washington DC or outside continental US call 202-483-7616	<b>Distributed By:</b> M & G Inc 954 525 5557, 2415 SW 3rd Ave; Ft. Lauderdale FL 33315

**SECTION II**

**HAZARDOUS INGREDIENTS / IDENTITY INFORMATION**

<b>Hazardous Components Specific Chemical Identity</b>	<b>OSHA PEL</b>	<b>ACGIH TLV</b>	<b>Other Limits Recommended</b>	<b>Percent</b>
Lead, CAS #7439921	0.05 mg/m <sup>3</sup>	0.15 mg/m <sup>3</sup>	N/A	40-70
Sulfuric Acid, CAS #7664939	1.00 mg/m <sup>3</sup>	1.00 mg/m <sup>3</sup>	N/A	20-44
Antimony, CAS #74403360	0.50 mg/m <sup>3</sup>	0.50 mg/m <sup>3</sup>	N/A	0-4

**SECTION III**

**PHYSICAL/CHEMICAL CHARACTERISTICS (Sulfuric Acid)  
Older MSDS Form - Archival only!**

**\*\*NOT APPLICABLE TO NON-SPILLABLE SVR BATTERIES\*\***

<b>Appearance and Odor:</b> N/A	<b>Solubility in Water:</b> N/A
<b>Boiling Point:</b> N/A	<b>Specific Gravity (H<sub>2</sub>O=1):</b> N/A
<b>Evaporation Rate (Butyl Acetate=1):</b> N/A	<b>Vapor Density (AIR=1):</b> N/A

**Melting Point:** N/A

**Vapor Pressure (mm Hg):** N/A

**Section IV**

**FIRE AND EXPLOSION HAZARD DATA**

**Flash Point (Method Used):** non-flammable **Flammable Limit:** [\\*hydrogen gas](#)

**Extinguishing Media:** Class ABC extinguisher, CO<sub>2</sub> and/or Halon **LEL:** 4% **UEL:** 74%

**Special Fire Fighting Procedures:** Cool exterior of battery if exposed to fire to prevent rupture. The acid mist and vapors in a fire situation are corrosive. Wear special respiratory protection (SCBA) and clothing.

**Unusual Fire and Explosion Hazards:** \*When overcharging this battery produces [hydrogen gas](#), which may explode if ignited. Use adequate ventilation, avoid open flames, sparks, or other sources of ignition near battery.

**SECTION V**

**REACTIVITY DATA (Battery Case)**

**Older MSDS Forms - Archival only!**

**Stability:** Stable **Condition to Avoid:** Cases decompose at 160-410° C (322-770° F)

**Incompatibility (Materials to Avoid):** Strong oxidizing agents such as hot nitric acid, etc.

**Hazardous Decomposition of By-Products:** Combustion can produce carbon dioxide (CO<sub>2</sub>) and Carbon Monoxide (CO).

**Hazardous Polymerization:** will not occur. **Conditions to Avoid:** N/A

**SECTION VI**

**HEALTH HAZARD DATA (Sulfuric Acid)**

**\*\*NOT APPLICABLE TO NON-SPILLABLE SVR BATTERIES\*\***

**Route(s) of Entry:** N/A

**Carcinogenicity:** N/A

**Signs and Symptoms of Exposure:** N/A

**Medical Condition Generally Aggravated by Exposure:** N/A

**Health Hazards (Acute and Chronic):** Do not open battery, avoid contact with internal components. Internal components include lead and gelled electrolyte. Electrolyte is corrosive and contact may cause skin irritation and chemical burns.

**Emergency and First Aid Procedures:** (Contact with internal components if battery is opened)

1. Flush contacted area with large amounts of water for at least 15 minutes. Remove contaminated clothing and obtain medical attention if necessary.
2. If swallowed, give large volumes of water. **DO NOT** induce vomiting, obtain medical treatment.

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## SECTION VII

### PRECAUTIONS FOR SAFE HANDLING AND USE

**\*\*NOT APPLICABLE TO NON-SPILLABLE SVR BATTERIES\*\***

.....

**Steps to be Taken in Case Material is Released or Spilled:** N/A

**Waste Disposal Method:** Lead-acid batteries are completely recyclable. For information on returning Lead acid batteries for recycling, call (954) 525-5557

**Precautions to be Taken in Handling and Storing:** Store away from reactive material as defined in Section V, Reactivity Data.

**Other Precautions:** If battery case is broken, avoid direct contact with internal components. Keep away from ignition sources during charging

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## SECTION VIII

### CONTROL MEASURES

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**Respiratory Protection (Specific Type):** N/A

**Ventilation:** Must be provided when charging in an enclosed area.

**Protective Gloves:** N/A

**Eye Protection:** Recommended

**Other Protective Clothing or Equipment:** N/A

**Work / Hygienic Practices:** Good personal hygiene and work practices are recommended.

Bruce.The Wise.

Bruce.The Cheap!

Bruce.The Surly.

Bruce.The Q&A

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September, 2009

Sonnenschein contacts in [Australia](#) [Asia](#) [N & S America](#) [Europe](#)  
[Africa](#)

N.America Tel 954 525 5557 Fax 954 522 3748 - [Lauderdale Battery & Alternator](#), 2415 SW 3rd Ave, Ft Lauderdale FL 33315

A200	A300	A400	A500
A600	Gassing	Charging	Shipping
HazMat MSDS1	HazMat MSDS2	Prevailer/Gel-Tech	AGM types

This data are believed to be current but is presented here only as a broad indication. For MSDS for a specific Battery product, you must rely ONLY on the Manufacturers current MSDS , a copy of which should be obtained from your Battery product supplier.

## I. Product Identification.

### European and International.

#### Manufacturer:

Accumulatorenfabrik  
Sonnenschein GmbH  
Thiergarten  
6470 Budigen/Hessen  
West Germany

#### Chemical / Trade Name (as used on label):

Maintenance Free Battery  
Valve Regulated Battery  
Sealed Lead-Acid Battery

#### Distributed By:

Lauderdale Battery  
2415 SW 3rd Avenue  
Ft. Lauderdale, FL 33315  
USA 33315. Tel 954 525 5557

#### Chemical Family / Classification: Electric Storage Battery

**Date Issued:** February 25,2007 - Revised; n/a

#### For Information:

Environmental Resources Dept.  
Ask for Environmental Coordinator

**For Emergency:** CHEMTREC (800) 424-9300. 24 hour  
Emergency Response Contact.  
CHEMTREC International 703 527 3887 (collect)

## II. Hazardous Ingredients / Identity Information

Components	CAS Number	Approximate Air Exposure Limits (ug/m <sup>3</sup> )			
		% by Weight	OSHA	ACGIH	NIOSH
Inorganic compound of:					
Lead	7439-92-1	60-68	50	50	50
Calcium	7440-70-2	0.03	--	--	--
Tin	7440-31-5	0.28	2000	2000	--
Electrolyte (hydrogel)					
Sulfuric Acid (Diluted sulfuric acid in solid state, percentage acid: 38.5%; distilled water: 61.5%).	7664-93-9	17-22	1000	200	1000
Silicon Dioxide	60676-86-0	4-6	N/A	N/A	N/A
Case Material:					

Acrylonitrile	9003-56-9	4-12	N/A	N/A	N/A
Butadiene Styrene					
or	9003-07-0		N/A	N/A	N/A
Polypropylene					

NOTE: Inorganic lead and electrolyte are the primary components of every battery manufactured by Exide Corporation or its subsidiaries. Other ingredients may be present dependent upon battery type. Polypropylene is the principal case material.

### III. Physical Data - Electrolyte

<b>Boiling Point:</b>	112°C	<b>Density:</b>	1.30g/cm <sup>3</sup>
<b>Point of Solidification:</b>	-69°C	<b>Vapor Pressure (mm Hg)</b> 25°C: [77F]	21 mbar
<b>Solubility in Water</b>	100%	<b>Vapor Density (AIR=1):</b>	Greater Than 1
<b>Evaporation Rate (Butyl acetate=1):</b>	Less Than 1	<b>% Volatiles by Weight:</b>	N/A
<b>Appearance and Odor:</b>	A white translucent gel; no apparent odor. A battery is a manufactured article.		N/A

### IV. Fire and Explosion Hazard Data

<b>Flash Point:</b>	N/A
<b>Flammable Limits:</b>	LEL = 4.1% (Hydrogen Gas in Air) UEL = 74.2%
<b>Extinguishing Media:</b>	CO <sub>2</sub> ; foam; dry chemical Use positive pressure, self contained breathing apparatus. Beware of acid splatter during water application and wear acid resistant clothing, gloves, face and eye protection. If batteries are on charge, shut off power to the charging equipment, but, note that the strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down.
<b>Special Fire Fighting Procedure:</b>	In operation, batteries generate and release <a href="#">flammable hydrogen gas</a> . They must always be assumed to contain this gas which, if ignited by burning cigarette, naked flame or spark, may cause battery explosion with dispersion of case in fragments and corrosive liquid electrolyte. Carefully follow manufacturer's instructions for installation and service. Keep away all sources of gas ignition and do not allow metallic articles to simultaneously contact the negative and positive terminals of a battery.
<b>Unusual Fire and Explosion Hazards:</b>	

### V. Reactivity Data

<b>Stability:</b>	Stable
<b>Conditions to Avoid:</b>	Prolonged overcharge at high current; sources of ignition.
<b>Incompatibility (Materials to avoid)</b>	<i>Electrolyte:</i> Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulfur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. <i>Lead Compounds:</i> Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.
<b>Hazardous Decomposition</b>	<i>Electrolyte:</i> Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide.

**Products:** *Lead Compounds:* Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

## VI. Health Hazard Data

### Routes of Entry:

Electrolyte: Harmful by all routes of entry.

Lead compounds: Hazardous exposure can occur only when product is heated above the melting point, oxidized, or otherwise processed or damaged to create dust, vapor, or fume.

### Inhalation:

Electrolyte: Breathing of sulfuric acid vapors or mists may cause severe respiratory irritation.

Lead Compounds: Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.

### Ingestion:

Electrolyte: May cause severe irritation of mouth, throat, esophagus, and stomach.

Lead Compounds: Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. This may lead rapidly to systemic toxicity.

### Skin Contact:

Electrolyte: Severe irritation, burns, and ulceration.

Lead Compounds: Not absorbed through the skin.

### Eye Contact:

Electrolyte: Severe irritation, burns, cornea damage, blindness.

Lead Compounds: May cause eye irritation.

### Effects of Overexposure - Acute:

Electrolyte: Severe skin irritation, damage to cornea may cause blindness, upper respiratory irritation.

Lead Compounds: Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances, and irritability.

### Effects of Overexposure - Chronic:

Electrolyte: Possible erosion of tooth enamel; inflammation of nose, throat, and bronchial tubes.

Lead Compounds: Anemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage; reproductive changes in both males and females.

### Carcinogenicity:

Electrolyte: The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category I carcinogen, a substance that is carcinogenic to humans. This classification does not apply to sulfuric acid solutions in static liquid state or to the electrolyte in batteries. Batteries subjected to abusive charging at excessively high currents for prolonged periods of time without vent caps in place may create a surrounding atmosphere of the offensive strong inorganic acid mist containing sulfuric acid.

Lead Compounds: Listed as a 2B carcinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present.

### Medical Conditions Generally Aggravated by Exposure:

Overexposure to sulfuric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of electrolyte with skin may aggravate skin diseases such as eczema and contact dermatitis. Contact of electrolyte with eyes may damage cornea and/or cause blindness. Lead and its compounds can aggravate some forms of kidney, liver, and neurologic diseases.

### Emergency and First Aid Procedures:

#### Inhalation:

Electrolyte: Remove to fresh air immediately. If breathing is difficult, give oxygen.

Lead Compounds: Remove from exposure, gargle, wash nose and lips; consult physician.

**Ingestion:**

Electrolyte: Give large quantities of water; **DO NOT** induce vomiting; consult physician.

Lead Compounds: Consult physician immediately.

**Skin:**

Electrolyte: Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely, including shoes.

Lead Compounds: Wash immediately with soap and water.

**Eyes:**

Electrolyte and Lead: Flush immediately with large amounts of water for at least 15 minutes; consult physician immediately.

## VII. Precautions for Safe Handling and Use

**Handling:**

No hazards under normal usage as the sulfuric acid is immobilized in a gel structure.

**Handling and Storage:**

Store batteries under roof in cool, dry, well-ventilated areas which are separated from incompatible materials and from activities which may create flames, sparks, or heat. Keep away from metallic objects which could bridge the terminals on a battery and create a dangerous short-circuit. Single batteries pose no risk of electric shock, but there may be increasing risk of electric shock from strings of connected batteries exceeding three 12-volt units.

**Charging:**

There is a possible risk of electric shock from charging equipment and from strings of series-connected batteries, whether being charged or not. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas. Charging space should be ventilated. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near batteries being charged.

**Spill or Leak Procedures:**

Stop flow of material, contain/absorb small spills with dry sand, earth, vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Neutralized acid must be managed in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

**Waste Disposal Methods:**

Spent batteries: Send to secondary lead smelter for recycling.

**Electrolyte**

Place neutralized slurry into sealed acid resistant containers and dispose of as hazardous waste, as applicable. Large, water diluted spills, after neutralization and testing, should be managed in accordance with approved local, state, and federal requirements. Consult state Environmental Agency and/or Federal EPA.

**Precautionary Labelling:**

POISON - CAUSES SEVERE BURNS  
DANGER - EXPLOSIVE GASES  
CORROSIVE - CONTAINS SULFURIC ACID  
KEEP AWAY FROM CHILDREN

## VIII. Control Measures

**Engineering Controls:**

Handle Batteries cautiously. If mechanical ventilation is used, components must be acid-resistant.

**Work Practices:**

Store and handle batteries in well ventilated areas. If battery case is damaged, avoid bodily contact with internal

components. Wear protective clothing, eye, and face protection when handling or charging batteries.

#### Respiratory Protection:

None required under normal conditions. When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA-approved respiratory protection.

#### Protective Gloves:

None required under normal conditions.  
If battery case is damaged, use rubber or plastic acid-resistant gloves with elbow length gauntlet.

#### Eye Protection:

None required under normal conditions.  
If Battery caes is damaged, use chemical goggles or face shield.

#### Other Protection:

Under severe exposure or emergency conditions, wear acid-resistant clothing, gloves, and boots.

#### Emergency Flushing:

In areas where water and sulfuric acid solutions are handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

## IX. Other Regulatory Information

#### NFPA Hazard Rating for sulfuric acid:

Flammability (Red)	=	0
Health (Blue)	=	3
Reactivity (Yellow)	=	2

**Note:** Sulfuric acid is water-reactive if concentrated

#### TRANSPORTATION:

**Note:** SONNENSCHNEIN batteries meet the test requirements for "nonspillable wet electric storage batteries", as required by DOT 49 CFR 173.159(d), and IMO/IMDG and ICAO/IATA packing instruction 806 and Note A67; Therefore are **non-regulated** when protected against short circuits, kept upright and securely packaged. (This data refers to undamaged batteries).

The Battery and the outer packaging must be plainly and durably marked "NONSPILLABLE" or "NONSPILLABLE BATTERY"

**RCRA:** Spent lead-acid batteries are not regulated as hazardous waste when recycled. Spilled sulfuric acid is a characteristic hazardous waste; EPA hazardous waste number D002 (corrosivity). Call 1 954 525 5557 for assistance in safe recycling.

#### Cercla (Superfund) and EPCRA:

Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (Superfund) and EPCRA (Emergency

- (a) Planning and Community Right to Know Act) is **1,000 lbs.** State and local reportable quantities for spilled sulfuric acid may vary.
- (b) Sulfuric acid is listed "Extremely Hazardous Substance" under EPCRA, with a Threshold Planning Quantity (TPQ) of **1,000 lbs.**  
EPCRA Section 302 notification is required if 1,000 lbs. or more of sulfuric acid is present at one site. An
- (c) average battery contains approximately 5 lbs. of sulfuric acid. Contact your Exide representative for additional information.
- (d) EPCRA Section 312 Tier Two reporting is required for non-automotive batteries if sulfuric acid is present in quantities of 500 lbs. or more and/or if lead is present in quantities of 10,000 lbs. or more.

**Supplier Notification:** This product contains toxic chemicals which may be reportable under EPCRA Section 313

(e) Toxic Chemical Release Inventory (Form R) requirements. For a manufacturing facility under SIC codes 20 through 39, the following information is provided to enable you to complete the required reports.

Toxic Chemical	CAS Number	Approximate % by Weight
Lead	7439-92-1	60-68%
Sulfuric Acid/Water Solution	7664-93-9	17-22%

If you distribute this product to other manufacturers in SIC Codes 20 through 39, this information must be provided with the first shipment of each calander year.

**Note:** The Section 313 supplier notification requirement does not apply to batteries which are "consumer products".

**TSCA:**

Ingredients in Exide's batteries are listed in the TSCA Registry as follows:

	CAS NO.	TSCA Status
<b>Electrolyte</b>		
Sulfuric Acid (H <sub>2</sub> SO <sub>4</sub> )	7664-93-9	Listed
<b>Inorganic Lead Compound</b>		
Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO <sub>4</sub> )	7446-14-2	Listed
Calcium (Ca)	7440-70-2	Listed
Tin (Sn)	7440-31-5	Listed

**CANADIAN REGULATIONS.**

All Chemical substances are listed on the CEPA DSL/NDSL, or are exempt from requirements.

**CALIFORNIA PROPOSITION 65**

**"WARNING:** This product contains lead, a chemical known to the State of California to cause cancer, or birth defects or other reproductive harm."

**CAA:**

Exide corporation supports preventative actions concerning ozone depletion in the atmosphere due to emissions of CFC's and other ozone depleting chemicals (ODC'S), defined by the USEPA as Class I substances. Pursuant to Section 611 of the Clean Air Act Amendments (CAAA) of 1990, finalized on January 19, 1993, Exide established a policy to eliminate the use of Class I ODC's prior to the May 15, 1993 deadline.

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PREPARED BY: ENVIRONMENTAL RESOURCES DEPARTMENT

VENDEE AND THIRD PERSONS ASSUME THE RISK OF INJURY PROXIMATELY CAUSED BY THE MATERIAL IF REASONABLE SAFETY PROCEDURES ARE NOT FOLLOWED AS PROVIDED FOR IN THE DATA SHEET, AND VENDOR SHALL NOT BE LIABLE FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN IF REASONABLE PROCEDURES ARE FOLLOWED.

ALL PERSONS USING THIS PRODUCT, ALL PERSONS WORKING IN AN AREA WHERE THIS PRODUCT IS USED, AND ALL PERSONS HANDLING THIS PRODUCT SHOULD BE FAMILIAR WITH THE CONTENTS OF THIS DATA SHEET. THIS INFORMATION SHOULD BE EFFECTIVELY COMMUNICATED TO EMPLOYEES AND OTHERS WHO MIGHT COME IN CONTACT WITH THE PRODUCT.

WHILE THE INFORMATION ACCUMLATED AND SET FORTH HEREIN IS BELIEVED TO BE ACURATE AS OF THE DATE HEREOF, EXIDE CORPORATION MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE FOR THEIR PARTICULAR CIRCUMSTANCES.

ANY PHOTOCOPY MUST BE OF THIS ENTIRE DOCUMENT  
(ESSENTIALLY SIMILAR TO FORM OSHA 20 - U.S. DEPARTMENT OF LABOR)

See also [SafeHandlingGel.pdf](#)

Bruce.The Wise.

Bruce.The Cheap!

Bruce.The Surly.

Bruce.The Q&A

3045914

September, 2009

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