



# Material Safety Data Sheet

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Authorised By : Technical Manager

## PRODUCT IDENTIFICATION

**PRODUCT NAME :** Sealed Lead Acid Battery - AGM

**OTHER NAMES :** Exide Marathon, Marathon FT, Sprinter, Absolyte, Champion, Powergard

**PRODUCT TYPE :** Sealed Lead Acid battery (VRLA)

**UN Number :** 2800

**CAS Number :** See Notes

**HAZCHEM CODE :** 2X

**POISONS SCHEDULE No. :** S6

**DANGEROUS GOODS CLASS :** 8

**PACKAGING GROUP :** III

**PRODUCT USE :** Power supply - Standby, Emergency lighting, Traction, Diesel start, UPS, Solar

## PRODUCT SUPPLIER DETAILS

**Supplier:** EXIDE TECHNOLOGIES

**A.B.N.:** 84 093 272 005

**ADDRESS:** **Street:** 55 Bryant Street  
PADSTOW  
New South Wales 2211  
Australia

**Postal:** Locked Bag 416  
MILPERRA  
New South Wales 1891  
Australia

**TELEPHONE:** 61 2 9722 5700

**FACSIMILE:** 61 2 9774 2966

**EMERGENCY TELEPHONE NUMBER:** 1 800 033 111 (All Hours)

## PRODUCT COMPOSITION / INGREDIANCE

MATERIAL OR COMPONENT	CAS Number	PERCENTAGE
Lead	7439-92-1	40-60%
Lead Dioxide	1309-60-0	20-30%
Antimony	7440-36-0	2-6%
Tin	7440-31-5	0- 2%
Calcium, Cadmium	7440-70-2, 7440-43-9	0.02%, 0.2-0.3%
Arsenic	7440-38-2	0.02%
Electrolyte ( Sulfuric acid/ water Solution)	7664-93-9	26-40%
Fibre Glass		2-5%
Plastics- SAN, ABS		3-4%
Plastics- Polyethylene	9002-88-4	2-3%
Plastics - Polypropylene	9003-07-0	5-12%

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## PHYSICAL PROPERTIES

	Lead/Lead Compounds	Sulphuric Acid	Plastics
<b>Appearance</b>	Silver- grey metal, White powder, Brown	Clear liquid	Plastics sheet, rings, tubes, jar, lid
<b>Melting Point</b>	327 C	Liquid	NA
<b>Boiling Point</b>	1070C	95C- 115C	NA
<b>Vapour Pressure</b>	NA	17 to 11 mm HG	NA
<b>Specific Gravity</b>	11.34	1.230-1.350	NA
<b>Flashpoint</b>	NA	NA	NA
<b>Flammability Limits</b>	NA	NA	NA
<b>Solubility in Water</b>	NA	100%	NA

## REACTIVITY DATA

	Lead/Lead Compounds	Sulphuric Acid	Polypropylene
<b>Incompatibility</b>	Strong acid, ammonium nitrate, sodium oxide, oxidants, Potassium, carbides, sulfides, peroxides, phosphorus and sulfur	Highly corrosive to most metals, carbides, chlorates, nitrates	NA
<b>Stability</b>	Stable	Stable	Stable
<b>Hazardous decomposition products</b>	Lead oxides	Sulfur dioxide, hydrogen sulfide, hydrogen and sulfuric acid mist	
<b>Hazardous polymerisation</b>	NA	NA	NA

## HEALTH HAZARD INFORMATION

<b>ACUTE TOXICITY</b>	Sulfuric acid may cause severe skin irritation, burns, and damage to cornea and possible blindness and upper respiratory irritation. Lead compounds may cause abdominal pain, nausea, headaches, vomiting, diarrhoea, severe cramping and difficulty in sleeping.
<b>SWALLOWED</b>	Sulfuric acid may cause severe irritation of mouth, throat, oesophagus and stomach. Lead compounds may cause abdominal pain, nausea, vomiting, diarrhoea and severe cramping. Acute ingestion should be treated by physician.
<b>EYES</b>	Sulfuric acid may cause severe irritation of eyes, burns, cornea damage and possible blindness. If eyes come in contact with acid, immediately wash with plenty of water and keep flushing for 15 minutes.. Acute ingestion should be treated by physician.
<b>SKIN</b>	Sulfuric acid may cause severe irritation, burns and ulceration. Lead compounds are not absorbed through the skin.
<b>INHALED</b>	Sulfuric acid vapours or mist may cause severe respiratory irritation. Lead dust or fumes may cause irritation of upper respiratory tract or lungs.
<b>CHRONIC TOXICITY</b>	Sulfuric acid may lead to scarring of cornea, inflammation of the nose, throat and bronchial tubes and possible erosion of tooth enamel. Lead compounds may cause anaemia, damage to kidneys and nervous system. May cause reproductive changes in both males and females.

## FIRST AID INFORMATION

<b>SWALLOWED</b>	<b>Sulfuric acid</b> – Give large quantities of water or milk. DO NOT induce vomiting, then consult physician. <b>Lead</b> – Consult physician.
<b>EYES</b>	<b>Sulfuric acids</b> – flush immediately with cool water for atleast 15 minutes, then consult physician. <b>Lead compounds</b> – flush immediately with cool water for atleast 15 minutes, then consult physician.
<b>SKIN</b>	<b>Sulfuric acid</b> – Flush with large amounts of water for atleast 15 minutes, remove any contaminated clothing and do not wear again until cleaned. If acid is splashed on shoes, remove and discard if they contain leather. Lead compounds are not absorbed through the skin.

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<b>INHALED</b>	<p><b>Sulfuric acid</b> – Remove to fresh air immediately. If breathing is difficult, give oxygen.</p> <p><b>Lead compounds</b> – Remove from exposure; gargle, wash nose and eyes and consult physician.</p>
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<b>ADVICE TO DOCTOR</b>	Treatment for sulfuric acid and lead.
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## PRECAUTIONS FOR USE

<b>EXPOSURE STANDARDS</b>	<p>Threshold limit value for Metallic Lead is 0.15 mg/ cubic meter in air</p> <p>Threshold value for limit Sulphuric acid is 1 mg/ cubic meter in air</p>
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<b>ENGINEERING CONTROLS</b>	Store and handle lead acid batteries in well-ventilated areas.
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<b>PERSONAL PROTECTION</b>	<p><b>Respiratory protection:</b> None required under normal conditions. If concentration of sulfuric acid mist is noticed, use respirators.</p> <p><b>Eyes and face:</b> Face shields or goggles required as per AS2676.2</p> <p><b>Hands, Arm, Body:</b> None required under normal conditions. May require Rubber or plastic acid resistant gloves with elbow gauntlet if the electrolyte is exposed due to damage to the cell.</p> <p><b>Other protective clothing:</b> None required under normal conditions. May require acid resistant Apron if the electrolyte is exposed due to damage to the cell. Under severe exposure or emergency conditions, wear acid resistant clothing and boots.</p>
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<b>FLAMMABILITY</b>	<p><b>Flash point:</b> NA</p> <p><b>Flammability limits:</b> 2%- (Hydrogen gas)</p> <p><b>Extinguishing media:</b> CO<sub>2</sub> : Foam: Dry chemicals</p> <p><b>Special fire fighting procedures:</b> If batteries are on charge, turn off power. Use positive pressure, self-contained breathing apparatus. Water applied to electrolyte generates heat and causes it to splatter. Hence do not use water. Wear acid resistant clothing. Avoid contact with all short circuit across battery terminals.</p> <p><b>Unusual fire and Explosion hazards:</b> Hydrogen and Oxygen gases are produced in the cells during normal battery operation or when on charge (Hydrogen is highly flammable and Oxygen supports combustion). These gases enter the air through the vent caps. To avoid risk of fire or explosion, keep sparks and other sources of ignition away from the battery. Do not allow metallic material to simultaneously contact both the positive and negative terminals of the batteries. By-products of some of the burnt plastics (used in the battery containers and cases) could cause serious injury or death. Breathing apparatus should be used. Follow manufacturer's instructions for installation.</p> <p><b>Other effects of Fire or Abnormal temperature:</b> Sulfuric acid vapour, combustion products of Lead oxide, PVC, Polypropylene, Fibre glass, polyester.</p>
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## SAFE HANDLING INFORMATION

<b>STORAGE AND TRANSPORT</b>	<p>Do not place anything on the battery tops. Do not use or allow metallic items to short circuit the battery terminals. Do not cover the batteries with aluminium coated sarking. This product contains scheduled poison (S6).</p>
<b>SPILLS AND DISPOSAL</b>	<p>Remove combustible materials and all sources of ignition. Stop flow of material and contain spill by dyking with Soda ash (sodium carbonate) or Quick lime (calcium oxide) or Baking soda (Sodium bicarbonate). Carefully neutralise spill with soda ash, etc. Make certain mixture is neutral then collect residue and place in a drum or other suitable container with a label specifying "contains hazardous waste". Dispose off as hazardous waste. If battery is leaking, place battery in a heavy-duty plastic bag. Wear acid resistant boots, faceshield, acid resistant apron, and acid resistant gloves.</p> <p><b>DO NOT RELEASE UNNEUTRALISED ACID TO SEWER.</b></p> <p><b>Waste disposal :</b></p> <p><b>Sulfuric acid:</b> Neutralise as described above for a spill, collect residue in a container labelled as containing hazardous waste. Dispose off as a hazardous waste. If uncertain, call the supplier.</p> <p><b>DO NOT FLUSH LEAD CONTAMINATED ACID TO SEWER.</b></p> <p><b>Batteries:</b> Send to lead smelter after consulting Exide.</p> <p>Please note that there is usually no flow of electrolyte from an absorbed electrolyte battery even if the casing is broken or punctured.</p>
<b>FIRE/EXPLOSION HAZARD</b>	<p>Refer to section on FLAMMABILITY.</p>
<b>OTHER PRECAUTIONS</b>	<p>Sulfuric acid is highly corrosive to most metals. Lead is not compatible with Strong acid, ammonium nitrate, sodium oxide, and oxidants. Follow supplier's instructions. Avoid naked flames and prohibit smoking, sparks, etc. from battery charging areas. Avoid mixing acid with other chemicals.</p>
<b>SUBSIDIARY RISK</b>	<p>The international agency for research on cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a category carcinogen, a substance that is carcinogenous to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions 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 however result in the generation of sulfuric acid mist.</p>

Note: Sealed Lead acid batteries (VRLA) have absorbed electrolyte and usually do not contain free electrolyte and hence considered to be " non spillable batteries".

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