


FUJIAN MINHUA POWER SOURCE CO., LTD.
 Longqiao Industry Zone, Economy Development Zone, Anxi, Fujian, China
 TEL:0595-22637788 FAX:0595-22633777

Material Safety Data Sheet

Section 1 --- Identification of The Product and The Company

Product Name : Valve Regulated Sealed Lead-Acid Battery
 Company Identification: FUJIAN MINHUA POWER SOURCE CO., LTD.
 Longqiao Industry Zone, Economy Development Zone,
 Anxi, Fujian, China
 TEL: 0595-22637788 FAX: 0595-22633777

Section 2---Composition/Information of Ingredients

Main Composition: Lead (Pb, PbO₂, PbSO₄)
 Sulfuric acid
 Fiberglass Separator
 ABS Plastic
 Terminal

Section 3---Hazardous Components

Components	Content	The threshold value	Oral LD50	In the half lethal dose	Exposure to lethal dose
Lead (Pb, PbO ₂ , PbSO ₄)	70%	N/A	<500mg/kg	N/A	N/A
Sulfuric acid	20%	1mg/m ³	2. 135mg/kg	N/A	N/A
Fiberglass separator	5%	N/A	N/A	N/A	N/A
ABS Plastic	5%	N/A	N/A	N/A	N/A

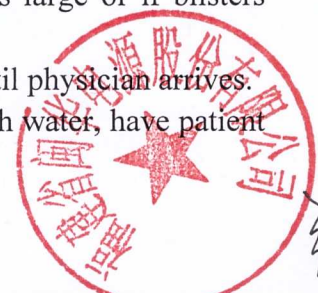
Section 4---First Aid Measures

SULFURIC ACID PRECAUTIONS

Skin Contact: Flush with water, see physician if contact area is large or if blisters form.

Eye Contact: Call physician immediately and flush with water until physician arrives.

Ingestion: Call physician. If patient is conscious, flush mouth with water, have patient



drink milk or sodium bicarbonate solution.

Section 5---Fire-Fighting Measures

Components	Flashpoint	Explosive limits	Comments
Lead	None	None	
Sulfuric acid	None	None	
Hydrogen	268°C	4%-72.4%	Sealed batteries can emit hydrogen if over charged(float voltage>2.40VPC)
Fiberglass separator	N/A	N/A	Toxic vapors may be released. In case fire, wear self-contained breathing apparatus.
ABS Plastic	None	N/A	Temp. over 300°C(573°F) may release combustibile gases. In case of fire: wear positive pressure self-contained breathing apparatus.

Section 6---Accidental Release Measures

Steps to take in case of leak or spill:

If sulfuric acid is spilled from a battery, neutralize acid with bicarbonate (baking soda), sodium carbon (soda ash), or calcium oxide (lime). Flush area with water and discard to the sewage system. Do not allow neutralized acid into sewage system.

Section 7--- Handling & Storage

- 1) Examine the appearance of the battery before use.
- 2) Store the battery in a cool place.
- 3) Recharge the battery that has been stored more than 3 months.
- 4) Charge the battery in a well-ventilated environment.
- 5) Secure the battery firmly installed in equipment.
- 6) Don't load and unload the battery roughly.
- 7) Prohibit to dissecting the battery.
- 8) Don't attempt to use a cracked, deformed or leaky battery.
- 9) Don't subject the battery to excess vibration or violent jolted.
- 10) Prohibit to burning the battery or put it near the fire.



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Section 8--- Exposure Controls/ Personal Protection

SKIN: Rubber gloves, Apron

RESPIRATORY: Respirator (for lead)

EYES: Safety goggles, Face Shield

COMMENTS: Protective equipment must be worn if the battery is cracked or otherwise damaged. A respirator should be worn during reclaim operations if the TLV is exceeded.

Section 9---Physical & Chemical Properties

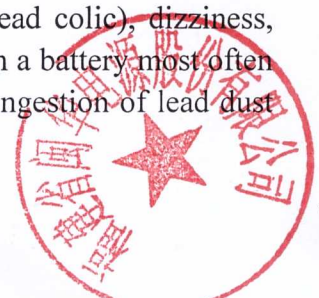
Components	Density	Melting Points	Solubility in Water	Odor	Appearance
Lead	11.34	327.4°C	None	None	Silver-Grey Metal
Lead Sulfuric	6.2	1070°C	40mg/L(15°C)	None	White Powder
Lead dioxide	9.4	290°C	None	None	Brown Powder
Sulfuric acid	About 1.3	114°C	100%	Acidic	Clean Colorless liquid
Fiberglass separator	N/A	N/A	Slight	Toxic	White Fibrous Glass
ABS Plastics	N/A	N/A	None	None	Solid plastics

Section 10---Stability & Reactivity Data

COMPONENT	Sulfuric Acid
STABILITY	Stable at all temperature
POLYMERIZATION	Will not polymerize
INCOMPATIBILITY	Reactive metals, strong bases, most organic compounds
DECOMPOSITION PRODUCTS	Sulfuric dioxide, trioxide, hydrogen sulfide, hydrogen
CONDITIONS AVOID	Prohibit smoking, sparks, etc. from battery charging area. Avoid mixing acid with other chemicals.

Section 11---Toxicological Information

LEAD: The toxic effects of lead are accumulative and slow to appear. It affects the kidneys, reproductive, and central nervous systems. The symptoms of lead overexposure are anemia, vomiting, headache, stomach pain (lead colic), dizziness, loss of appetite, and muscle and joint pain. Exposure to lead from a battery most often occurs during lead reclaim operations through the breathing or ingestion of lead dust.



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or fumes.

SULFURIC ACID: Sulfuric acid is a strong corrosive. Contact with acid can cause severe burns on the skin and in eyes. Ingestion of sulfuric acid will cause GI tract burns. Acid can be released if the battery case is damaged or if vents are tampered with.

FIBERGLASS SEPARATOR: Fiber glass is an irritant of the upper respiratory tract, skin and eyes. For exposure up to 10F/CC use MSA Camphol with type H filter. Above 10F/CC up to 50F/CC use Ultra-Twin with type H filter. This product is not considered carcinogenic by NTP or OSHA.

Section 12--- Electrical Safety

Due to the battery's low internal resistance and high power density, high levels of short circuit current can be developed across the battery terminals. Do not rest tools or cables on the battery. Use insulated tools only. Follow all installation instructions and diagrams when installing or maintaining battery systems.

Section 13---Disposal Considerations

Neutralized acid may be flushed down the sewer. Spent batteries must be treated as hazardous waste and disposed of according to local, state, and federal guidelines. A copy of this MSDS must be supplied to any scrap dealer or secondary lead smelter with battery.

Section 14 --- Transportation Information

173.159(d) and IATA/ICAO [Special Provision A67]

We hereby certify that all BAOTE Rechargeable Sealed Lead Acid batteries conform to the UN2800 classification as "Batteries, wet, Non-Spillable, and electric storage" as a result of passing the Vibration and Pressure Differential Test described in DOT [49 CFR 173.159(d) and IATA/ICAO [Special Provision A67].

BAOTE Batteries having met the related conditions are EXEMPTING from hazardous goods regulations for the purpose of transportation by DOT, and IATA/ICAO, and therefore are unrestricted for transportation by any means.

Non-spillable batteries must be packed according to IMDG page 8121. The shipping information for non-spillable batteries is as follows:

Proper Shipping Name: Batteries, wet, non-spillable
UN Identification: UN2800
Packing Group: III



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In addition, some non-spillable batteries have been tested and meet the non-regulated criteria listed in the IMDG code page 8121. These batteries are excepted from all IMDG code provided that the batteries' terminals are protected against short circuits.

Section 15 --- Control Measure

Engineering Controls:

Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant.

Work Practices:

Handle batteries cautiously to avoid spills. Make certain vent caps are on securely. Avoid contact with internal components. Wear protective clothing when filling or handling 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:

Rubber or plastic acid-resistant gloves with elbow-length gauntlet.

Eye Protection:

Chemical goggles or face shield.

Other Protection:

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

Emergency Flushing:

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

Section 16 --- Other Information

This information is based on our current level of knowledge and relates to the products in the states in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particularity.

ALL DATA MUST BE PASSED TO ANY SCRAP DEALER OR SMELTER
WHEN BATTERY IS RESOLD.



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