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PIHSIANG®

**Material Safety Data Sheet (MSDS) for the
Rechargeable Sealed Lead-Acid Battery**

Related to

**All Models of Medical Scooter
and Power Wheelchair
manufactured by PMMC**

Presented by

PIHSIANG MACHINERY MFG. CO., LTD.

Report No.: RD0990159-A2

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MSDS for the Rechargeable Sealed Lead-Acid Battery

Description: Rechargeable Sealed Lead-Acid Battery

Specification: 12V/10Ah, 12Ah, 22Ah, 35Ah, 50Ah, 75Ah (ASR Series)

Model Applied: All models of medical scooter and power
wheelchair manufactured by PMMC

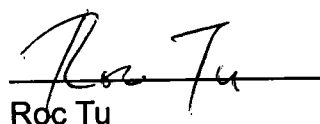
MSDS Report: Shown as attached.

Prepared by


Paggie

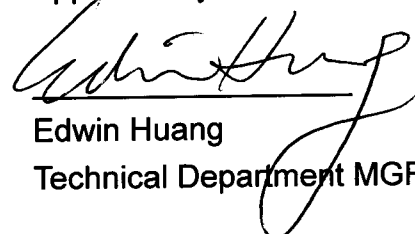
Technical Department

Reviewed


Roc Tu

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Approved by


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MATERIAL SAFETY DATA SHEET**According the European directive 2001/58/CE****Date : 02 05 2009****Section 1. Chemical Product**

MSDS Name: Sealed Maintenance Free Lead-Acid Batteries Series

Section 2. Composition /Information on Ingredients:

Chemical Nature: Lead, Lead Oxide, Lead Sulfate, Sulfuric Acid

CAS-No/EINECS NO.: List as below

Tariff No. 85072000

Dangerous ingredients which have to be mentioned according to 99/45/EEC and it adaptations

Chemical Name	HAZARDOUS	TLV(UNITS)	RISK PHRASES
CAS No.	%by weight		
Lead	50	N/A	
7439-92-1			
Lead Oxide	23	N/A	
1309-60-0			
Lead Sulfate	1	N/A	
7446-14-2			
Sulfuric Acid	8	1.25-1.35g/m ³	
7664-93-9			

Section 3. Hazards identifications

General:

Under normal operating conditions, the internal material will not be hazardous to your health. Only internally exposed material during production or case breakage or extreme heat (fire) may be hazardous to your health. The Common known rules for handing of chemicals should be obeyed. Do not eat/drink the product.

Physical-Chemical Hazards:

This preparation is not classified as dangerous according to the criteria of directive 99/45/EEC

Hazards to man:

This is preparation is classified Xi, N R38-43 according to the CE directive, May cause sensitization by skin contact

Hazards to environment:

When spilled, this product may raze the surface of plastic, leather and paint, underground and surface water.

Section 4. First -aid measures:

Inhalation:

In case of excessive inhalation remove the person to fresh air and at rest Obtain medical advice.

Skin Contact:

Remove contaminated clothing. Wash affected areas with plenty of water and soap. If irritation occurs, consult a physician.

Eye contact:

Rinse eyes immediately with running water for at least ten minutes. Consult an ophthalmologist.

Ingestion:

Rinse mouth with water Give plenty of water to drink. Do not induce vomiting. Obtain medical advice.

Section 5. Fire-fighting measures

Suitable extinguishing media:

Carbon dioxide (CO₂), foam, dry chemical powder.

Extinguishing media not to be used:

Never use a direct water jet.

Exposure hazards from combustion products:

In case of fire, carbon dioxide, carbon monoxide and other toxic organic substances will be generated.

Do not inhale fumes and smoke.

Personal protective equipments:

Wear full protective clothing. Use self-contained breathing apparatus.

Remark:

Because of only keep about 10ml auto perfume in care.
Even if fire, It can be extinguished by car extinguisher.**Section 6. Accidental release measures:**

Personal precautions

Wear protective clothing. Keep unprotected persons away.

Environmental precautions:

Avoid discharge and penetration into sewerage systems, waterways, pits, and cellars.

Methods for cleaning up:

Collect spilled material with an inert standard absorbent like sand or silica. Care for well-ventilated conditions. Recycle or dispose of the materials in an appropriate way.

Section 7. Handling and storage

General

Obey the common known rules and precautions for handling with chemicals.

Fire/Explosion protection

Product vapors and oxygen/air may lead to potentially explosive mixtures. Keep ignition sources away. Do not smoke. Avoid electrostatic charge. Provide fire extinguisher.

Storage:

Store product in well-filled, appropriate coated and tightly closed containers avoiding influence of oxygen/air, light and humidity. Store at a cool and constant temperature.

Section 8. Exposure controls/Personal protection

Exposition/ Technical measures

Atmospheric vapor concentrations must be minimized by adequate ventilation.

Protection of hands, eyes and skin:

To protect hands, eyes and skin, the use of appropriate chemical resistant gloves, safety glasses and suitable protective clothing is strictly recommended.

9. Physical and chemical properties of Electrolyte

Physical state: liquid

Solubility in water: soluble

Color: clear

Vapor pressure: no applicable

Odor: acidic odor

Explosion limit: not applicable

pH value: not determined

Oxidizing properties: not applicable

Specific gravity: 1.215-1.350 (at 25 °C)

Flashpoint: none

Auto flammability: not determined

Partition coefficient: not determined

Melting Point: lead 327.4°C

Boiling Point: 1515°C

Freezing Point: not determined

Section 10. Stability and Reactivity

Good stability at standard temperature. Avoid temperatures above or close to the flash point. Never heat sealed containers. This product presents no significant reactivity hazard, by itself or in contact water.

Reactivity: Avoid contact with acids, Alkali or strong oxidizing agents.

Hazardous decomposition products: carbon monoxide and unidentified organic compounds may be formed during combustion.

Section 11. Toxicological information

The product is multi component mixture for which no toxicological data exists.

This preparation is classified XI, N R38-43.

Section 12. Ecological information

In general, no ecological data is available for preparations.

Precautions Avoid disposing into drainage systems and in the environment.

Section 13. Disposable considerations

Don not dispose of in environment or into sewerage. If recycling is not possible, the product and its container have to be disposed of in accordance with your local legislation and regulations.

Section 14. Transport Information

Road (ADR/RID): not regulated.

Air (ICAO/IATA): not regulated.

Sea (IMDG): not regulated.

The batteries have no free liquid acid in them and do not spill acid even when the cases are cracked.

We hereby certify that the batteries conform to the UN2800 classification as "Batteries, wet, Non-Spillable, electric storage". We further certify that under (I.A.T.A.) Dangerous Goods Regulation, 41st edition, UN2800 provision A67 and the (D.O.T.), CFR 49 Section 173.159 paragraph d., the batteries having met the related conditions are EXEMPT from hazardous goods regulations, and therefore are unrestricted for Transportation by any means.

For you reference:

IATA Dangerous Goods Regulation, 44th Edition, Section 4.5A, Special Provision;

A67 Non-spillable batteries are considered to be non-dangerous if at a temperature of 55 deg. C (130 deg. F), the electrolyte will not flow from a ruptured or cracked case and there is no free liquid to flow and if, when packaged for transport, the terminals are protected from short circuit.

So it is General cargo, not DG cargo.

Section 15. Regulatory Information

Symbol: N/A

R/S-Phrases:

R38 Irritation to skin

R43 May cause sensitization by skin contact

S2 Keep out of reach of children

S24 Avoid contact with skin

S37 Wear suitable gloves

S61 Avoid release to environment. Refer to special instructions.

Section 16. Other information

The information on this Material Safety Data Sheet (MSDS) was obtained from current and reputable sources. However, the data is provided without any warranty; expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to assume liability on loss, injury, damage, or expense resulting from improper use of this product. Any previous MSDS of this product mentioned above are hereby replaced with this new document. We urge you to make this information available as appropriate in your organization and to any others with whom you arrange to handle this product.