

MSDS Report

Sample Description

Lead-Acid Battery

Applicant

Changxing Noble Power Co., Ltd

Pony Testing International Group
www.ponytest.com

+Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

Sample Name: Lead-Acid Battery

Sample Code: 6-DZM-10

Company Identification: Changxing Noble Power Co., Ltd

Mainland Address: Lincheng Industrial Zone, ChangXin, China

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Section 2 - Composition, Information on Ingredients

Chemical Name	Percent (by weight)	CAS No.	EINECS
Lead(Pb)	70%	7439-92-1	231-100-4
Sulfuric acid	26%	7664-93-9	231-639-5
Plastic	4%	9003-07-0	Unlisted

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! The battery pack and enclosed cells should not be opened, disassembled, crushed, burned, or exposed to high temperatures. Exposure to the ingredients contained within the battery pack could be harmful under some circumstances. Battery contains lead compounds, which can cause cancer and reproductive harm. Do not use organic solvents or other chemical cleaners on battery. Under normal use and handling, the customer has no contact with the internal components of the battery. Under normal use and handling these batteries do not emit regulated or hazardous substances.

Target Organs: None.

Hazard Sorts: 8.

Potential Health Effects:

- **Eye:** No effect under routine handling and use.
- **Skin:** No effect under routine handling and use.
- **Ingestion:** No effect under routine handling and use.
- **Inhalation:** No effect under routine handling and use.

Other risk: On some bad using conditions (high over charge, inverse charge, external short circuit...) and in case of a bad functioning, some electrolyte can be removed from the cell by the security vent. In these cases the risk is the electrolyte.

Section 4 - First Aid Measures

Caution! No effect under routine handling and use. If exposure to internal materials within cell due to damaged outer Metal casing, the following actions are recommended.

Eyes: Rinse immediately with plenty of water during at least 15-30 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid.

Inhalation: If inhaled, remove from exposure and move to fresh air immediately. Rinse mouth and nose with water. Get medical aid.

Ingestion: If the injured is fully conscious: plenty of water or milk. Do not induce vomiting. Get medical aid immediately.

Section 5 - Fire Fighting Measures

General Information: Cells can be overheated by an external source or by internal shorting.

Special fire fighting procedures:

If batteries are on charge, turn off power. Use positive pressure, self-contained breathing apparatus in fighting fire. Water applied to electrolyte generates heat and causes it to splatter. Wear acid resistant clothing. Ventilate area well.

Unusual fire and explosion hazards:

Hydrogen and oxygen gases are generated in cells during normal battery operation or when on charge. These gases enter the air through the vent caps during battery overcharging. To avoid risk of

fire or explosion, keep sparks and other sources of ignition away from the battery. Do not allow metal objects to simultaneously contact both positive and negative terminal of batteries.

Extinguishing Media: Chemical powder, foam, CO₂.

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Remove heat and sources of ignition. Neutralize any spilled electrolyte or exposed battery parts with soda ash or sodium bicarbonate until fizzing stops. Ph should be neutral at 6-8. Collect residue and place in a suitable container. Dispose of clean-up materials as a hazardous waste. When neutralized, the spill is non-hazardous. Keep untrained individuals away from the spilled material. Place the broken battery in a heavy gauge plastic bag or other non-metallic container. Provide adequate ventilation, hydrogen gas may be given off during neutralization.

Section 7 - Handling and Storage

Storage: Store in a cool (-20~40℃), dry, well-ventilated area away from incompatible substances. Keep sparks and other sources of ignition away from the battery. Do not allow metal objects to simultaneously contact both positive and negative terminal of batteries.

Handling: No hazards during handling, no electrolyte can pour out of the sealed battery. Avoid overheating and overcharging. Avoid shake and physical damage. Do not charge in unventilated areas. Do not use organic solvents or other than recommended chemical cleaners on battery.

Section 8 - Exposure Controls, Personal Protection**Exposure Limit:****Composition: CAS# 7439-92-1**

- PEL-TWA 0.05 mg/m³ (OSHA)
- REL-TWA 0.05 mg/m³ (NIOSH)

Composition: CAS# 7664-93-9

- PEL-TWA 1 mg/m³ (OSHA)
- TLV-TWA 1 mg/m³ (ACGIH)
- TLV-STEL 3 mg/m³ (ACGIH)

Composition: CAS# 9003-07-0

- TLV-TWA 10 mg/m³ (ACGIH, total)
- PEL-TWA 15 mg/m³ (OSHA, total)
- PEL-TWA 5 mg/m³ (OSHA, respiration)

Monitoring Methods: No information found.

Engineering Controls: General room ventilation is sufficient during normal use and handling. Do not install these batteries in sealed, unventilated areas. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Work/Hygienic Practices: Remove jewelry, rings. Watches and any other metallic objects while working on battery. All tools should insulate to avoid the possibility of shorting connections. DO NOT lay tools on top of the battery. Be sure to electricity from tools and individual person by touching a grounded surface in the vicinity of the battery, but are heavy. Serious injury can result from improper lifting or installation. DO NOT lift, carry, install or remove pulling the terminal posts for safety reasons and because terminal posts and post seals may be damaged. DO KEEP a fire extinguisher and emergency communications the work area.

Personal Protective Equipment(In the Event of Battery Case Breakage):

Always wear safety glasses with side shields or full face shield. Use rubber or neoprene gloves. Wear acid resistant boots, apron or clothing.

Other Protection: No smoking or eating scene work. To maintain good health habits. Wash hands throughly after working with battery and before eating, drinking or smoking.

Section 9 - Physical and Chemical Properties

Physical State: The battery is solid (Contains sulfuric acid liquid)

Odor: Odorless

Molecular Formula: N/A

Molecular Weight: N/A

Flash Point: N/A

PH: N/A

Viscosity: N/A

Density: N/A

Solubility: Lead, lead oxide and lead sulfate are insoluble in water. Sulfuric acid is 100% soluble in water.

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal use.

Conditions to Avoid: When a battery cell is exposed to an external short-circuit, crushed, modification, high temperature, it will be the cause of heat generation and ignition. Direct sunlight and high humidity. Prolonged overcharge.

Incompatibilities with Other Materials: Conductive materials, water, seawater, strong oxidizers, strong reducing agents, carbides, chlorates, nitrates, picrate. Combination of sulfuric acid with combustibles and organic materials may cause fire and explosion.

Hazardous Decomposition Products: Hydrogen gas may be generated in an overcharged condition, in fire or at very high temperatures. CO, CO₂ and sulfur oxides may emit in fire.

Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

Toxicological Information:

Composition: CAS# 7664-93-9

- LD50: 2140 mg/kg (oral, rat)
- LC50: 510 mg/m³/2h (inhalation, rabbit)

Carcinogenicity:

Composition: CAS# 7439-92-1

- ACGIH: A3-Confirmed animal carcinogen with unknown relevance to humans.
- California: carcinogen; initial date 10/1/92
- OSHA: Possible Select carcinogen
- IARC: Group 2B carcinogen-Possibly carcinogenic to humans
- NTP: Listed as Lead and Lead Compounds

Composition: CAS# 7664-93-9

- Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Composition: CAS# 9003-07-0

- IARC: Group 3-Not classifiable as to carcinogenicity to humans
- Not listed by ACGIH, NTP, or CA Prop 65.

Sensitization Rate: Not available.

Teratogenicity: Not available.

Section 12 - Ecological Information

Ecological Toxicity: Not available.

Ecological Degradation: Not available.

Biology Degradation: Not available.

Other Information: Sulfuric acid is harmful to aquatic life in very low concentrations. It may be dangerous if it enters water intakes.

Section 13 - Disposal Considerations

Spent battery must be treated as hazardous waste and disposed of according to local state, and federal regulations. A copy of this material safety data must be supplied to any scrap dealer or secondary smelter with battery.

Section 14 - Transport Information

Regulated as a hazardous material for transportation. (US DOT; CANADA TDG; IMDG; IATA DGR)

UN: 2800

Classification: 8

Packaging Sign:



Shipping Name: Batteries-Wet, Non-Spillable, Electric Storage

Transport Fashion: Cargo by sea, by road, by rail

Packaging Category: N/A

Packaging Method: N/A

Shipping Notice: N/A

Criteria: The tests report for sealed lead-acid battery 6-DZM-12 which is used in Electric Bicycle (Report code: 2009EW0084, Wuxi products quality supervision and inspection institute).

Section 15 - Regulatory Information

Regulatory Information: Reference to the local, national and EU / international regulations.

TSCA: CAS# 7439-92-1

CAS# 7664-93-9

CAS# 9003-07-0

DSL: CAS# 7439-92-1

CAS# 7664-93-9

CAS# 9003-07-0

OSHA: CAS# 7439-92-1

CAS# 7664-93-9

California Prop 65: CAS# 7439-92-1

Hazard Symbols: None.

Risk Description:

R 23: Toxic by inhalation.

R 24/25: Toxic in contact with skin and if swallowed.

R 35: Causes severe burns.

R 36/37/38: Irritating to eyes, respiratory system and skin.

R 40: Limited evidence of a carcinogenic effect.

R 49: May cause cancer by inhalation.

Safety Description:

S 23: Do not breathe gas/fumes/vapour/spray.

S 30: Never add water to this product.

S 36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S 45: In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.).

Section 16 - Additional Information

Issue Time: 2009-05-18

Issue Department: Technical department

Data review unit:

Modification record:

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Other Information:

ACGIH:(American Conference of Governmental Industrial Hygienists);CAS:(Chemical Abstracts Service);DOT:(Department of Transportation);DSL:(Domestic Substances List);EINECS:(European Inventory of Existing Commercial Substances);IATA:(International Air Transport Association);IMDG:(International Maritime Dangerous Goods);LD50:(Lethal dose, 50 percent kill);NIOSH:(National Institute for Occupational Safety and Health);NTP:(National Toxicology Program);OSHA:(Occupational Safety and Health);PEL:(Permissible Exposure Level);REL:(Recommended Exposure Limit);STEL:(Short Term Exposure Limit);TDG:(Transportation of Dangerous Goods);TSCA:(Toxic Substances Control Act);TWA:(Time Weighted Average);TLV:(Threshold Limit Value)