Report No.: SZ080610-045

MSDS Report

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ACCREDITATION BOARD FOR LABORATORIES（No.CNAS L3192）

Samples	Valve Regulated Lead Acid Battery (DJW6-4.0)
Client Unit	Shenzhen Leoch Battery Technology Co., Ltd.
Client Address	5 Floor, Xinbaohui Bldg., Nanhai Blvd., Nanshan, Shenzhen, China.

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Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

Product Name: Valve Regulated Lead Acid Battery (DJW6-4.0)
Sample Code: DJW6-4.0
Manufacture: Shenzhen Leoch Battery Technology Co., Ltd.
Address: 5 Floor, Xinbaohui Bldg., Nanhai Blvd., Nanshan, Shenzhen, China.
Post Code: 518052
Tel: 0755-86036060
Emergency Telephone: 0755-86036060
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Email: battery@leoch.com

Section 2 – Composition/Information on Ingredient

Chemical Name		In % By Weight	CAS No.
Plate	Lead dioxide	59.6	1309-60-0
	Lead		7439-92-1
AGM clapboard		2.6	---
Electrolyte (Dilute sulfuric acid)		24.6	7664-93-9
Battery Shell (ABS Plastic)		10.2	9003-56-9
Epoxide-resin glue		0.6	---
Red marking glue		0.2	---
Black marking glue		0.2	---
Terminal	Copper	0.2	7440-50-8
Safety valve (EPDM)		0.09	25038-36-2
Sealed gasket (EPDM)		0.02	25038-36-2
Electrolysis lead 1#		surplus	7439-92-1

Section 3 - Hazards Identification

Eye

Contact electrolyte: Severe irritation, burns, blindness.
Contact lead dioxide and lead: May cause eye irritation.

Skin

Contact electrolyte: Severe irritation, burns.
Contact lead dioxide and lead: May cause skin irritation.

Inhalation

Contact electrolyte: Breathing of sulfuric acid vapors or mists may cause severe respiratory system irritation.
Contact lead dioxide and lead: May cause irritation of upper respiratory tract with nausea, vomiting, diarrhea. May cuase lung damage.

Ingestion

Contact electrolyte: May cause severe irritation of mouth, throat and stomach.
Contact lead dioxide and lead: May cause abdominal pain, nausea, vomiting and diarrhea. This may lead rapidly to systemic toxicity.

Section 4 - First Aid Measures

Eyes

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

Inhalation

Remove from exposure and move to fresh air immediately. Use oxygen if available.

Ingestion

Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician.

Section 5 - Fire Fighting Measures

Extinguishing Media

CO_2, foam, dry chemical.

Firefighting

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 strings of series connected batteries may still pose risk of electric shock even when charging equipment is shut down.
In operation, batteries generate and release flammable hydrogen gas. If ignited by burning cigarette, naked flame or spark, may cause battery explosion with dispersion of casing 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.

Section 6 - Accidental Release Measures

Steps to be Taken in case Material is Released or Spilled

If the battery is accidently broken and organic electrolyte leaks out, wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can.
The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

Waste Disposal Method

It is recommended to discharge the battery to the end, to use up the metal lead inside the battery, and to bury the discharged battery in soil.

Section 7 - Handling and Storage

The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.

Precautions to be taken in handling and storing

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatrues should be avoided.
Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls

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

Work Practices

Handle batteries cautiously. Avoid bodily contact with internal components. Wear protective clothing, eye and face protection, when filling or handling batteries.

Respiratory Protection

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

Protective Gloves

Rubber or plastic acid-resistant gloves.

Eye Protection

Chemical goggles or face shield.

Body Protection

Protective Clothing.

Section 9 - Physical and Chemical Properties

Nominal Voltage: 6V.

Rated Capacity: 4.0Ah.

Appearance Characters: White, odorless, cuboid battery.

Chemical Uses: Telecom systems, Powered systems, UPS, Standby power, Solar system, Electric mobility, Portable power tools, Electric vehicles and motorcycles, etc.

Section 10 - Stability and Reactivity

Stability

Stable

Conditions to Avoid

Heating, mechanical abuse and electrical abuse.

Incompatibility

Electrolyte: 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.

Lead dioxide and lead: Avoid contact with strong acids, bases, haliders, halogenates, potassium nitrate and reducing agents.

Hazardous Decomposition Products

Electrolyte: Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide.

Lead dioxide and lead: Temperatures above the melting point are likely to produce toxic metal fume, vapor or dust.

Section 11 - Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened. Exposure to internal contents, the corrosive fumes will be very irritating to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

Section 12 - Ecological Information

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

Section 13 - Disposal Considerations

Waste Disposal Methods

Spent batteries: Send to secondary lead smelter for recycling.

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.

Section 14 - Transport Information

Proper Shipping Name: Batteries, wet, filled with acid

Hazard Class: 8

UN No.: UN2794

Hazard Label: Corrosive

If this battery met the test requirements for "nonspillable wet electric storage batteries", as provided in 49 CFR 173.159(d), are non-regulated when protected against short circuits, kept upright, and securely packaged.

If nonspillable wet electric storage batteries have not met these requirements,

the following information would apply:
Proper Shipping Name: Batteries, wet, non-spillable
Hazard Class: 8
UN No.: UN2800
Hazard Label: Corrosive

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

Transport Fashion: By air, by sea, by railway, by highway.

Section 15 - Regulatory Information

<<Dangerous Goods Regulation>>(IATA)
<<International Maritime Dangerous Goods>>
SARA 313
CERCLA
TSCA
California Proposition 65
Law Information
In accordance with all Federal, State and Local laws.

Section 16 - Additional Information

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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