

# MATERIAL SAFETY DATA SHEET

**Product Name** : Electric moped sealed lead-acid battery

**Applicant** : Chaowei Power Co., Ltd

**Address** : No.12 Pheasant Island Avenue, Zhicheng, Changxing,  
Zhejiang Province, China

Signed by Shanghai Outao Testing Technology Service Co., Ltd

Written by



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## MATERIAL SAFETY DATA SHEET

### Section 1 – Chemical Product and Company Identification

<b>Product name</b>	Electric moped sealed lead-acid battery
<b>Type</b>	6-DZM-12/6-DZM-13T/6-DZM-20/6-DZM-22T/6-DZM-22Y/6-DZM-23/6-DZM-30B/6-EVF-32/6-EVF-36T/6-EVF-32Y/6-EVF-38/6-EVF-42T/6-EVF-45/6-EVF-48T/6-EVF-50/6-EVF-51/6-EVF-56/8-DZM-10/8-DZM-14/8-DZM-20/6-DZM-12+/6-DZM-20+/6-EVF-32+/3-EVF-150A/3-EVF-180A/3-EVF-200A/3-EVF-200T/4-EVF-150A/4-EVF-150/6-EVF-60/6-EVF-70/6-EVF-70T/6-EVF-80/6-EVF-100A/6-EVF-100T/6-EVF-100C/6-EVF-100/6-EVF-100(ZS-01)/6-EVF-110T/6-EVF-120/6-EVF-120A/6-EVF-150A/
<b>Manufacturer</b>	Chaowei Power Co., Ltd
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### Section 2 – Hazards Identification

Do not short circuit, puncture, incinerate, crush, immerse, force discharge or expose to temperatures above the declared operating temperature range of the product. Risk of fire or explosion. The rechargeable batteries described in this Product Safety Data Sheet are sealed units which are not hazardous when used according to the recommendations of the manufacturer.

Under normal conditions of use, the electrode materials and liquid electrolyte they contain are not exposed to the outside, provided the battery integrity is maintained and seals remain intact. Risk of exposure only in case of abuse (mechanical, thermal, electrical) which leads to the activation of safety valves and/or the rupture of the battery container. Electrolyte leakage, electrode materials reaction with moisture/water or battery vent/explosion/fire may follow, depending upon the circumstances.

In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns to skin and eyes.

#### Potential Health Effects

<b>Eye</b>	Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye.
<b>Skin</b>	Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin.
<b>Ingestion</b>	Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus, and



Inhalation	gastrointestinal tract. Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.
Environmental effects	Since a battery cell remains in the environment, do not throw out it into the environment.

### Section 3 – Composition/Information on Ingredient

Composition	CAS No.	EINECS
ABS	9003-56-9	Not assigned
Lead	7439-92-1	231-100-4
Calcium	7440-70-2	231-179-5
Tin	7440-31-5	231-141-8
Aluminium	7249-90-5	231-072-3
AGM	Not assigned	Not assigned
Sulfuric acid	7664-93-9	231-639-5
Epoxy resin	61788-97-4	Not assigned

### Section 4 – First Aid Measures

In the event of electrolyte leakage or escape of electrolyte:

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing.
<b>Skin contact</b>	Get medical advice/attention if you feel unwell. Remove/Take off immediately all contaminated clothing. Gently wash with plenty of soap and water. If skin irritation or burn occurs: Get medical advice/attention.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
<b>Ingestion</b>	Get medical advice/attention. Rinse mouth.
<b>Protection of first-aiders</b>	A rescuer should wear personal protective equipment, such as rubber gloves and airtight goggles.

### Section 5 – Fire Fighting Measures

<b>Specific hazards</b>	Highly flammable hydrogen gas is generated during charging and operation of batteries. To avoid risk of fire or explosion, keep sparks or other sources of ignition away from batteries. Do not allow metallic materials to simultaneously contact negative and positive terminals of cells and batteries. Follow manufacturer's instructions for installation and service.
<b>Suitable extinguishing media</b>	Dry chemical, foam, carbon dioxide
<b>Specific methods</b>	Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used. Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: Keep containers cool by spraying with water. Eliminate all ignition sources if safe to do so.
<b>Special protective equipment for firefighters</b>	When extinguishing fire, be sure to wear personal protective equipment.



## Section 6 – Accidental Release Measures

Avoid contact with spilled or released material. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. See Chapter 13 for information on disposal. Observe the relevant local and international regulations

<b>Personal precautions, protective equipment and emergency procedures:</b>	As an immediate precautionary measure, isolate spill or leak area for at least 25 meters in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed areas before entering. Wear adequate personal protective equipment as indicated in Section 8.
<b>Environmental precautions</b>	Prevent material from contaminating soil and from entering sewers or waterways.
<b>Methods and materials for containment and cleaning up</b>	Stop the leak if safe to do so. Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.
<b>Prevention of secondary hazards</b>	Remove all sources of ignition. Fire-extinguishing devices should be prepared in case of a fire. Use spark-proof tools and explosion-proof equipment.

## Section 7 – Handling and Storage

<b>Handling</b>	Do not open, disassemble, crush or burn battery. Do not expose cell to temperatures outside the range of -40°C to 80°C.
<b>Storage</b>	Store battery in a dry location. To minimize any adverse effects on battery performance it is recommended that the batteries be kept at room temperature (25°C +/- 5°C). Elevated temperatures can result in shortened cell life. Keep out of reach of children.

## Section 8 – Exposure Controls, Personal Protection

<b>Engineering controls</b>	Airborne exposures to hazardous substances are not expected when product is used for its intended purpose. Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fume and vapor.
<b>Exposure limits</b>	No data available
<b>Personal protective equipment</b>	
<b>Respiratory protection</b>	Not necessary under normal conditions. Wear self-contained breathing apparatus (SCBA) if handling an open or leaking battery.
<b>Hand protection</b>	Not necessary under normal conditions. Wear neoprene or natural rubber gloves if handling an open or leaking battery.
<b>Eye / Face protection</b>	Not necessary under normal conditions. Wear safety glasses if handling an open or leaking battery.
<b>Skin and body protection:</b>	Not necessary under normal conditions. Wear protective clothing and boots if handling an open or leaking battery.



**Section 9 – Physical and Chemical Properties**

<b>Physical appearance(20°C)</b>	Solid
<b>Odor</b>	Odorless
<b>Odor threshold</b>	No data available
<b>Type</b>	6-DZM-13.3/6-DZM-22.3/6-EVF-35.3

**Section 10 – Stability and Reactivity**

<b>Stability</b>	This product is stable under normal conditions.
<b>Reactivity</b>	No special reactivity has been reported.
<b>Conditions to avoid</b>	Avoid exposing the battery to fire or temperatures above 80°C. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.
<b>Incompatible materials</b>	Do not immerse in water or other high conductivity liquids, strong oxidizers, strong base
<b>Hazardous decomposition products</b>	sulfur dioxide, sulfur trioxide, carbon monoxide, sulfuric acid mist, and hydrogen.

**Section 11 – Toxicological Information**

There is no available data for the product itself. The information for the internal cell materials are as follows:

<b>Acute Toxicity</b>	Acute oral, dermal and inhalation toxicity data are not available for this article.
<b>Other Toxicity Data</b>	Risk of irritation occurs only if the battery is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory tract may occur.
<b>Corrosivity</b>	No data available
<b>Sensitization</b>	No data available
<b>Neurological Effects</b>	No data available
<b>Genetic Effects</b>	No data available
<b>Reproductive Effects</b>	No data available
<b>Developmental Effects</b>	No data available
<b>Target Organ Effect</b>	No data available
<b>Carcinogenicity</b>	Normal safe handling of this product will not result in exposure to substances that are considered human carcinogens by IARC (International Agency for Research on Cancer), ACGIH (American Conference of Governmental Industrial Hygienists, OSHA or NTP (National Toxicology Program).

**Section 12 – Ecological Information**

<b>Ecotoxicity</b>	
Lead	48 hr LC50 (modeled for aquatic invertebrates): <1 mg/L, base on lead bullion
Sulfuric Acid	24-hr LC50, freshwater fish (Brachydanio rerio): 82 mg/L 96 hr- LOEC, freshwater fish (Cyprinus carpio): 22 mg/L
<b>Persistence/ degradability</b>	Lead is very persistent in soils and sediments. No data available on



**Bioaccumulative potential (BCF)**

biodegradation.

Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants, but very little bioaccumulation occurs through the food chain. Most studies have included lead compounds, not solid inorganic lead.

**Mobility in soil**

Mobility of metallic lead between ecological compartments is low.

**Section 13 – Disposal Considerations**

**Waste Disposal Method**

Battery recycling is encouraged. Do NOT dump into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.

**USA**

Dispose of in accordance with local, state and federal laws and regulations.

**Canada**

Dispose of in accordance with local, provincial and federal laws and regulations.

**EC**

Waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

**Section 14 – Transport Information**

**Land transport(ADR/RID)**

UN-No.	UN2794
Proper shipping name	Batteries, Wet, Filled with Acid
Hazards Class	8
Packing group	III
Labels	Corrosive

**Inland waterways transport (ADN)**

UN-No.	UN2794
Proper shipping name	Batteries, Wet, Filled with Acid
Hazards Class	8
Packing group	III
Labels	Corrosive

**Sea transport (IMDG)**

UN-No.	UN2794
Proper shipping name	Batteries, Wet, Filled with Acid
Hazards Class	8
Packing group	III
Labels	Corrosive
ERG Code	8L
Reference	IATA packing instructions 870 (IATA DRG Edition 54)

**Air transport (IATA)**

UN-No.	UN2794
Proper shipping name	Batteries, Wet, Filled with Acid
Hazards Class	8
Packing group	III
Labels	Corrosive
EmS	F-A, S-B



Reference

IMDG packing instructions P801

**Section 15 – Regulatory Information**

**USA**  
**EC Classification for the Substance/Preparation**

All ingredients in the product are listed on the TSCA inventory. This product is not classified as hazardous according to Regulation (EC) No. 1272/2008. Keep out of the reach of children.

**European/International Regulations**  
**European Labeling in Accordance with EC Directives**

<b>Hazard Symbols:</b>	Xi, N
<b>Risk Phrases</b>	
R 20/22	Harmful by inhalation and if swallowed
<b>Safety Phrases</b>	
S 16	Keep away from sources of ignition - No smoking.
S 24/25	Avoid contact with skin and eyes
S 60	This material and/or its container must be disposed of as hazardous waste
S 61	Avoid release to the environment. Refer to special instructions / Safety data sheets

For details regulations you should contact the appropriate agency in your country.

**Section 16 – Additional Information**

MSDS Creation Date: September 28<sup>th</sup>, 2017

This MSDS was prepared sincerely on the basis of the information we could obtained; however, any warranty shall not be given regarding the data contained and the assessment of hazards and toxicity. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. Products are supposed to be used promptly after purchase in consideration of safety. Some new information or amendments may be added afterwards. If the products are to be used far behind the expected time of use or you have any questions, please feel free to contact us. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of "having unknown hazards and toxicity", which differ greatly depending on the conditions and handling when in use and/or the conditions and duration of storage. The products must be handled only by those who are familiar with specialized knowledge and have experience or under the guidance of those specialists throughout use from opening to storage and disposal. Safe usage conditions shall be set up on each user's own responsibility.

PRODUCT PHOTO



END OF REPORT