

MATERIAL SAFETY DATA SHEET

Version: 1.0

Valid Date: 01-Jan.-2024

Section 1: IDENTIFICATION:

Product Name:	Manufacturer/Supplier's Name and Address:
Valve regulated lead acid battery , absorbed electrolyte sealed valve regulated battery, gel battery, AGM battery, non-spillable sealed lead acid battery, CW Series, CWP Series, CWU Series.	Company Name: Zhejiang Chaowei Energy&Power Co., Ltd. Address: No.18 Chennan Road, Changxing County, Huzhou City, Zhejiang, China E-mail: global@chilwee.com

Section 2: HAZARD(S) IDENTIFICATION

The battery has passed the vibration test, pressure differential test and leakage test at 55 °C according to recommendations on the TRANSPORT OF DANGEROUS GOODS Model SPECIAL PROVISION 238. It is not restricted to IATA DGR according to special provision A67 and is not restricted to IMDG CODE according to special provision 238.

Lead/Lead oxides: Under normal conditions of use, lead dust, vapors, and fumes are not generated. Hazardous exposure may occur when product is overheated, oxidized or otherwise processed or damaged to create dust, vapor or fumes.

Inhalation: Lead dust or fumes may cause irritation of upper respiratory tract or lungs.

Skin Contact: Lead Compounds are not readily absorbed through the skin.

Eye Contact: Lead Compounds may cause eye irritation

Sulfuric acid: Under normal conditions of use, it will not be affected. When the battery is opened and leaks, dangerous contact may occur.

Skin contact: Sulfuric acid can corrode the skin.

Eye contact: Sulfuric acid can cause eye irritation.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS (chemical/common names)	Percent	CAS NUMBER:
Lead/Lead oxides	60% ~ 75%	7439-92-1
Sulfuric Acid	20% ~ 30%	7664-93-9
Separator	1.5% ~ 4%	65997-17-3
ABS Container	4% ~ 8%	9003-56-9

Section 4: FIRST AID MEASURES

Inhalation

- Sulfuric Acid: Remove to fresh air immediately. Give oxygen or artificial respiration if needed. Get immediate medical attention.
- Lead/Lead oxides: Remove from exposure, gargle, wash nose and lips, consult physician

Eyes contact

- Sulfuric Acid: Flush with plenty of water for at least 15 minutes, hold eyelids open. Get immediate medical attention..
- Lead/Lead oxides: Flush immediately with water for 15 minutes, consult a physician

Skin contact

- Sulfuric Acid: Flush with large amounts of water for at least 15 minutes, remove any contaminated clothing. If irritation develops seek medical attention.
- Lead/Lead oxides: Wash with soap and water.

Ingestion

- Sulfuric Acid: Ingestion: Do not induce vomiting. Dilute by giving large quantities of water. If available give several glasses of milk. Do not give anything by mouth to an unconscious person. Give CPR if breathing has stopped. Get immediate medical attention.
- Lead/Lead oxides: Consult a physician immediately

Section 5: FIRE FIGHTING MEASURES

Flash point:	Not Applicable
Suitable/unsuitable extinguishing media	Dry chemical, carbon dioxide, water, foam. Do not use water on live electrical circuits
Special firefighting procedures & protective equipment	Use appropriate media for surrounding fire. Do not use carbon dioxide directly on cells. Avoid breathing vapours. Use full protective equipment (bunker gear) and self-contained breathing apparatus.
Specific hazards in case of fire	Batteries evolve flammable hydrogen gas during charging and may increase fire risk in poorly ventilated areas near sparks excessive heat or open flames. Thermal shock may cause battery case to crack open. Containers may explode when heated.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal precautions	Avoid Contact with Skin. Neutralize any spilled electrolyte with neutralizing agents, such as soda ash, sodium bicarbonate, or very dilute sodium hydroxide solutions.
Environmental precautions	This material may be non-hazardous in ordinary use and may be discarded in accordance with applicable governmental regulations and take order with the demands of the environmental protection section. Please Prevent spilled material from entering sewers and waterways
Methods of clean up	Spill and leaks are unlikely because cells are contained in a sealed case. In the event of a battery rupture, prevent skin contact and

	<p>collect all released material in a plastic lined metal container to prevent spill from entering drinking water supplies or streams. Any product recovery or disposal must comply with local, state, federal, international or country Specific regulations.</p> <p>Lead acid batteries and their plastic cases are recyclable. Contact a Chilwee representative for recycling info.</p>
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Section 7: HANDLING & STORAGE

Handling

- It can be used normally under the temperature of -20~40°C.
- All connections should be connected accurately to avoid the possibility of a short circuit.
- Do not let oil and water or other contamination drop on the top of battery while working.
- Use only in the well-ventilated areas.
- Keep away from heat, sparks and open flames.
- Make available in the work area emergency shower and eyes wash.
- Avoid contact with skin and eyes. Use of full-length sleeves and pants; boots or work shoes are recommended for manufacturing operations.

Storage

- Store in cool, dry, well-ventilated area and away from combustible materials, sources of ignition, excessive heat and direct sunlight. Do not store in sealed areas.
- Warning: Not for use on children under 5 years old.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering controls/system design	Use ventilation equipment, safety showers and eye baths
Ventilation	General dilution ventilation is acceptable.
Respiratory protection	Wear government approved air purifying respirator if necessary.
Eye protection	Chemical safety glasses.
Skin protection	Wear chemical resistant gloves and appropriate protective clothing as a standard procedure to prevent skin contact.
Other protective clothing or equipment	Smoking, drinking and eating are strictly prohibited in the workplace. Wash hands thoroughly after working.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Sulfuric Acid, Gelatinous/ Lead, solid
Odor	Odorless
PH	<1

Solubility in water	Lead, lead oxide and lead sulfate are insoluble in water.
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SECTION 10: STABILITY & REACTIVITY

Stability	Sulfuric Acid, Gelatinous/ Lead, solid
Incompatibility (Materials to avoid)	Strong bases, combustible organic materials, reducing agents, finely divided metals, strong oxidizers, potassium, sodium and water.
Conditions to avoid	Direct sunlight, overheat, sparks and other sources of ignition, overcharging.
Hazardous polymerization	N/A

SECTION 11: TOXICOLOGICAL INFORMATION

Lead/Lead Oxides

- Toxic by ingestion or inhalation. Chronic poison.

Sulfuric Acid

- Contact may cause severe irritation to eyes and skin, causes burns. Potential Chronic

Health Effects

- Be slightly hazardous in case of skin contact (permeate).

Carcinogenic effects

- Very little chronic toxicity data available for elemental lead.
- Lead is listed by IARC as a 2B carcinogen: possible carcinogen in humans.
- Arsenic is listed by IARC, ACGIH, and NTP as a carcinogen, based on studies with high doses over long periods of time.
- The other ingredients in this product, present at equal to or greater than 0.1% of the product, are not listed by OSHA, NTP, or IARC as suspect carcinogens.
- The 19th Amendment to EC Directive No1272/2008 classified lead compounds, but not lead in metal form, as possibly toxic to reproduction.
- Risk phrase 61: May cause harm to the unborn child, applies to lead compounds, especially soluble forms.

SECTION 12: ECOLOGICAL INFORMATION

Lead/Lead Oxides

- Eco-toxicity: Not available. BOD5 and COD: tNo available.
- Products of Biodegradation: Possibly hazardous short-term degradation products are not likely. However, long-term degradation products may arise.
- Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself. Special Remarks on the Products of Biodegradation: Not available.

Sulfuric Acid

- Harmful to the environment, can cause pollution to water bodies and soil.

- Not available with biodegradability

SECTION 13: DISPOSAL CONSIDERATIONS

Spent batteries 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. Put into dustbin, otherwise incineration, otherwise licensed landfill, or safe disposal as required by local, state, federal, international or country specific regulations.

Empty Container Warnings: Empty containers may contain product residue, follow MSDS and label warnings even after they have been emptied.

SECTION 14: TRANSPORT INFORMATION

The battery is not restricted to IATA DGR according to special provision A67 and is not restricted to IMDG CODE according to special provision 238.

GROUND:

- Our non-spillable lead acid batteries meet all of the following requirements found at DOT 49 CFR 173.159(d)
- When offered for transport, the batteries are protected against short circuits and securely packaged as required by DOT 49 CFR 173.159(d) (1);
- The batteries and outer packaging are marked with the words “NONSPILLABLE” or “NONSPILLABLE BATTER” as required by DOT 49 CFR 173.159(d) (2);
- The batteries comply with the vibration and pressure differential tests found in DOT 49 CFR 173.159(d) (3).

AIRCRAFT-ICAO-IATA:

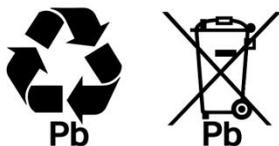
- Our non-spillable lead acid batteries also are excepted from the international hazardous materials (also known as dangerous goods) regulations since they comply with the following requirements:
- According to the requirements of Packing Instruction 806 in IATA(International Air Transport Association) and ICAO (International Civil Aviation Organization), there should not be any electrolyte leakage after the vibration and pressure differential tests .
- And, Special Provision A67 states Non-spillable batteries are not subject to these Instructions (Packing Instruction 806) if at the temperature of 55°C (131°F), the electrolyte will not flow from a ruptured or cracked case and there is no free liquid flow and if, when packaged for transport the batteries are protected from short circuit and unintentional activation .

VESSEL IMO-IMDG:

- Our non-spillable batteries are excepted from the international hazardous materials (also known as dangerous goods) regulations since they conform to the requirements of IMDG Code Special Provision 238, that is the batteries have passed the vibration and pressure differential performance tests, and at a temperature of 55°C, the electrolyte will not flow from a ruptured or cracked case and there is no free liquid flow and if, when package for transport, the terminal are protected from short circuit.

SECTION 15: REGULATORY INFORMATION

EU regulation: According to the EU2013 / 56 / EC battery directive, VRLA batteries should carry a crossed wheeled bin symbol with an ISO recycling symbol.

**SECTION 16: OTHER INFORMATION**

Disclaimer: This Safety Data Sheet is issued by 25-Dec.-2023 and based upon information and sources available at the time of preparation date. The information in the MSDS was obtained from sources that we believe are reliable but are beyond our direct supervision or control. We make no Warranty of Merchantability, Fitness for any particular purpose, or any other Warranty, Expressed or Implied, with respect to such information, and we assume no liability resulting from its use. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use of, or disposal of the product. It is the obligation of each user of the product to determine the suitability of this product and comply with the requirements of all applicable laws regarding use and disposal of this product. For additional information please contact@ global@chilwee.com