

Safety Data Sheet

According to 1907/2006/EC (REACH), 1272/2008/EC (CLP) and GHS

MSDS Code: EBO1710018-M038

Date of Issue: October 13, 2017

SEALED LEAD ACID BATTERY

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1. Identification Of Substance

Product Details

Product Name: SEALED LEAD ACID BATTERY
Product Model: Whole series
Manufacturer/Supplier By: TIGER CENTURY INTERNATIONAL CO., LTD
Duichuan Industrial Park East, Yanghe Town(Renhe), Gaoming District, Foshan City, Guangdong Province, 528513
Emergency Tel: +86-(0)13922981465

2. Hazards Identification

Classification of the substance or mixture according to Regulation (EC) No 1272/2008 [CLP/GHS]

No health effects are expected during normal use of this product as sold. Hazardous exposure may occur when the product is heated, oxidized or otherwise processed, damaged or subjected to misuse. Follow manufacturer's instructions for installation, service and use.

GHS code	Hazard class/category	Hazard class/category	Health 2008/98/EC code	Labels
H302	Acute Toxicity (Oral) Category 4	Harmful if swallowed	HP 6	
H314	Skin corrosion Category 1A	Causes severe skin burns and eye damage	HP 8	
H335	Specific target organ toxicity, single exposure, Respiratory tract irritation Category 3	Might cause respiratory irritation	HP 5	
H361	Reproductive toxicity Category 2	Suspected damaging of fertility or the unborn child	HP 10	

Environment

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GHS code	Hazard class/category	Hazard statements	2008/98/EC code
H 411	Hazardous to the aquatic environment, acute hazard Category 2	Toxicity to aquatic life with long lasting effect	HP 14

Labels



Physical

Under abnormal use in not ventilated rooms may form explosive air/gas mixture during charging or when extreme overcharging / Extremely flammable gas (hydrogen) / Explosive, fire, blast or projection hazard.

GHS code	Hazard class/category	Hazard statements	2008/98/EC code
H203	Explosives Division 1.3	Explosive; fire, blast or projection hazard	N/A

Labels



Precautionary Statements - Prevention

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Use only outdoors or in a well-ventilated area
- Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

- Immediately call a POISON CENTER or doctor/physician for all exposures
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- Wash contaminated clothing before reuse
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Precautionary Statements - Storage

- Store locked up

Precautionary Statements - Disposal

- Dispose of contents/container to an approved waste disposal plant

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Other Hazards

Very toxic to aquatic life with long lasting effects

3. Composition/Data On Components

COMPONENT	CAS #	EC No.:	% by wt.
Electrode plate: Lead	7439-92-1	231-100-4	66.2%
Electrolyte: Dilute sulphuric acid	7664-93-9	231-639-5	24.5%
Separator: Fiberglass	65997-17-3	266-046-0	2.7%
Battery shell: ABS	9003-56-9	NA	6.6%

4. First aid Measures

Take proper precautions to ensure you own health and safety before attempting to rescue a victim and provide first aid.

Inhalation :

Remove to fresh air immediately. If breathing is difficult, give oxygen.

Remove from exposure, gargle, wash nose and lips; consult physician.

Skin Contact:

Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely, including shoes.

Wash immediately with soap and water.

Eye Contact:

Flush immediately with large amounts of water for at least 15 minutes;

Consult physician immediately

Ingestion :

Give large quantities of water; do not induce vomiting; consult physician.

Consult physician immediately.

5. Fire Fighting Measures

Flash Point :

Not Applicable

Flammable Limits :

LEL = 4.1% (hydrogen gas in air) ; UEL = 74.2%

Extinguishing media:

CO2; foam; dry chemical

Fire Fighting Procedures:

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.

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Hazardous Combustion Products: In operation, batteries generate and release flammable hydrogen gas. They must always be assumed to contain this gas which, 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.

6. Accidental Release Measures

Remove combustible materials and all sources of ignition. Stop flow of material and contain spill by diking with soda ash, etc. Carefully neutralize spill with soda ash, etc. Make certain mixture is neutral then collect residue and place in a drum or other suitable container with a label specifying "contains hazardous waste" or (if uncertain call distributor regarding proper labeling procedures). Dispose of as hazardous waste. If battery is leaking, place battery in a heavy duty plastic bag. Wear acid resistant boots, face shield, chemical splash goggles and acid resistant gloves. Do not allow discharge of acid to sewer. Acid must be managed in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

7. Handling And Storage

Handling:

Single batteries pose no risk of electric shock but there may be increasing risk of electric shock from strings of connected batteries exceeding three 12-volt units. Batteries are non-spillable - potential for exposure to contents only during recycling or if outer casing is cracked or damaged.

Storage:

Store batteries under roof in cool, dry, well-ventilated areas that are separated from incompatible materials and from activities which may create flames, sparks, or heat. Keep away from metallic objects that could bridge the terminals on a battery and create a dangerous short-circuit.

Charging:

There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut-off power to chargers whenever not in use and before detachment of any circuit connections. Batteries being charged will generate and release flammable hydrogen gas. Charging space should be ventilated. Keep battery vent caps in position. Prohibit smoking.

8. Exposure Controls And Personal Protection

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Engineering Controls (Ventilation): Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant. Handle batteries cautiously. Make certain vent caps are on securely. If battery case is damaged, avoid bodily contact with internal components. Wear protective clothing, eye and face protection, when charging or handling batteries.

Hygiene Practices: Wash hands thoroughly before eating, drinking or smoking after handling batteries.

Respiratory Protection (NIOSH/MSHA approved): None required under normal conditions. When concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA-approved respiratory protection.

Skin Protection: None required under normal conditions. If battery case is damaged, use rubber or plastic acid-resistant gloves with elbow-length gauntlet, acid-resistant apron, clothing, and boots.

Eye Protection: None required under normal conditions. If battery case is damaged, chemical goggles or face shield.

Other Protection: In areas where water and sulfuric acid solutions are handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

9. Physical And Chemical Properties

Form:	Battery
Color:	Multicolor
Odor:	Odorless
Voltage:	2V, 6V, 12V
Capacity:	1.3AH-3000AH
Chemical Uses:	Power supply for electronic products.
pH:	Not applicable unless individual components exposed.
Flash point:	Not applicable unless individual components exposed.
Flammability:	Not applicable unless individual components exposed.
Relative density:	Not applicable unless individual components exposed.
Solubility (water):	Not applicable unless individual components exposed.
Solubility (other):	Not applicable unless individual components exposed.

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10. Stability And Reactivity

Stability:	Stable
Conditions to Avoid:	Prolonged overcharging and overheating current; sparks and other sources of ignition.
Incompatibilities:	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. No further concern for mechanical impact. Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent
Hazardous Decomposition Products:	Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide. Temperatures above the melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.
Hazardous Polymerization:	Will Not Occur

11. Toxicological Information

Routes of Entry:	Harmful by all routes of entry. Hazardous exposure can occur only when product is heated above the melting point, oxidized or otherwise processed or damaged to create dust, vapor, or fume.
Acute Toxicity:	Inhalation LD50: LC50 rat: 375 mg/m ³ ; LC50: guinea pig: 510 mg/m ³ Acute Toxicity Point Estimate = 4500 ppmV (based on lead bullion) Oral LD50: rat: 2140 mg/kg Acute Toxicity Estimate (ATE) = 500 mg/kg body weight (based on lead bullion)
Inhalation:	Breathing of sulfuric acid vapors or mists may cause severe respiratory irritation. Inhalation of lead dust or fumes may cause irritation of upper respiratory tract

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Ingestion:

and lungs.

May cause severe irritation of mouth, throat, esophagus, and stomach.

Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. This may lead rapidly to systemic toxicity.

Skin Contact:

Severe irritation, burns, and ulceration. Sulfuric acid is not readily absorbed through the skin and is not a dermal sensitizer.

Not absorbed through the skin and not a dermal sensitizer.

Eye Contact:

Severe irritation, burns, cornea damage, blindness.

May cause eye irritation.

Synergistic Products:

No known synergistic products

Synergistic effects have been noted with heavy metals (arsenic, cadmium, mercury), N-nitroso-N-(hydroxyethyl)ethylamine, N-(4-fluoro-4-biphenyl)acetamide, 2-(nitrosoethylamine)ethanol, and benzo[a]pyrene.

Additional Information:

Medical Conditions Generally

Overexposure to sulfuric acid mist may cause lung damage and aggravate

Aggravated by Exposure:

pulmonary conditions. Contact of electrolyte (water and sulfuric acid solution) with skin may aggravate skin diseases such as eczema and contact dermatitis. Contact of electrolyte (water and sulfuric acid solution) with eyes may damage cornea and/or cause blindness. Lead and its compounds can aggravate some forms of kidney, liver, and neurologic diseases.

Additional Health Data:

All heavy metals, including the hazardous ingredients in this product, are taken into the body primarily by inhalation and ingestion. Most inhalation problems can be avoided by adequate precautions such as ventilation and respiratory protection covered in Section VIII. Follow good personal hygiene to avoid inhalation and ingestion: wash hands, face, neck and arms thoroughly before eating, smoking or leaving the work site. Keep contaminated clothing out of non-contaminated areas, or wear cover clothing when in such areas. Restrict the use and presence of food, tobacco and cosmetics to non-contaminated areas. Work clothes and work equipment used in contaminated areas must remain in designated areas and never taken home nor laundered with personal non-contaminated clothing. This product is intended for industrial use only and should be isolated from children and their environment.

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12. Ecological Information

Environmental Fate: lead is very persistent in soil and sediments. No data on environmental degradation. Mobility of metallic lead between ecological compartments is slow. Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants but little bioaccumulation occurs through the food chain. Most studies include lead compounds and not elemental lead.

Environmental Toxicity:

Aquatic Toxicity: Sulfuric acid:
24-hr LC50, freshwater fish (Brachydanio rerio): 82 mg/L
96 hr- LOEC, freshwater fish (Cyprinus carpio): 22 mg/L
Lead:
48 hr LC50 (modeled for aquatic invertebrates): <1 mg/L, based on lead bullion

13. Disposal Considerations

Sulfuric Acid: Neutralize as described above for a spill, collect residue and place in a container labeled as containing hazardous waste. Dispose of as a hazardous waste. If uncertain about labeling procedures, call your local battery distributor or listed contact. DO NOT FLUSH LEAD CONTAMINATED ACID TO SEWER.

Spent batteries: Send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations
Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable. A copy of this MSDS must be supplied to any scrap dealer or secondary lead smelter with the battery.

14. Transport Information

Wet, non-spillable batteries do not need to be shipped and transported as fully-regulated Class 8 Corrosive hazardous materials / dangerous goods when tested, packaged and marked in accordance with the following regulations:

U.S. Hazardous Materials Regulations: 49 CFR 173.159(f) and 49 CFR 173.159a
The batteries are excepted from regulation if they have been tested in accordance with the vibration and pressure differential tests found in 49 CFR 173.159(f) and "rupture test" found at 49 CFR 173.159a;
When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with 49 CFR 173.159a; and
The batteries and outer packaging must be marked NON-SPILLABLE BATTERY or NON-SPILLABLE as required by

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49 CFR 173.159^a

IATA Dangerous Goods Regulations (58th) :Packing Instruction 872 and Special Provision A67

The batteries are excepted from regulation if they have been tested in accordance with the vibration and pressure differential tests found in Packing Instruction 872 and "rupture test" found in Special Provision A67 of the International Air Transport Association (IATA) Dangerous Goods Regulations

When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with Special Provision A67.

The words "Not Restricted" and "Special Provision A67" must be included in the description of the substance on the Air Waybill when an Air Waybill is issued.

IMDG Code: Special Provision 238.1 and 238.2

The batteries are excepted from regulation if they have been tested in accordance with the vibration and pressure differential tests and "rupture test" found in Special Provision 238.1 and 238.2.

When offered for transport, the batteries must be protected against short circuits and securely packaged in accordance with Special Provision 238.1 and 238.2.

If the regulations listed above are not met, then Batteries, wet, nonspillable (UN2800) are regulated as Class 8 Corrosive hazardous materials / dangerous goods by the U.S. Department of Transportation (DOT) and international dangerous goods regulatory authorities pursuant to the IATA Dangerous Goods Regulations and IMDG Code.

15. Regulations

Safety, health and environmental regulations/legislation specific for the substance or mixture

European Union: Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Authorizations and/or restrictions on use: This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV) This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

Persistent Organic Pollutants Not applicable

Ozone-depleting substances (ODS) regulation (EC) 1005/2009 Not applicable

Chemical Safety Report No information available

16. Other 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

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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.