

## Safety Data Sheet

The content and format of this SDS is accordant with 29 CFR 1910.1200 (OSHA standard)

### 1. Identification of the substance/preparation and of the company/undertaking

**Product details:**

**Product name:** Small-sized valve-regulated lead-acid batteries

**Product model:** 6V4AH (CP-6-4, WG-6-4), 6V4.5AH (CP-6-4.5, WG-6-4.5)

**Recommended use of the chemical and restrictions on use:** Backup power supply. Restrictions on use: Do NOT use it in an application which may contaminate food or do harm to human health.

**Manufacturer/Supplier:** Fujian Province Jian Yang Wan Guo Electrical Appliance Co., Ltd.

Address: Bao Ta Shan Xia Industrial Area, Jianyang City, Fujian Province, China.

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**Further information obtainable from:** Fujian Province Jian Yang Wan Guo Electrical Appliance Co., Ltd.

**Information in case of emergency:** +86-599-5828399

### 2. Hazards identification

**.GHS classification:**

Physical hazards	Health hazards	Environmental hazards
Explosives-not classified	Acute toxicity (oral)- 5	Acute hazards to the aquatic environment-3 Chronic hazards to the aquatic environment-not classified Hazard to the ozone layer-not classified
Flammable gases-not classified	Acute toxicity (dermal)-not classified	
Flammable aerosols-not classified	Acute toxicity (inhalation)-2	
Gases under pressure- not classified	Skin corrosion/irritation- 1A	
Flammable liquids- not classified	Serious eye damage/eye irritation -1	
Flammable solids-not classified	Respiratory sensitizer-not classified	
Self-reactive substances and mixtures-not classified	Skin sensitizer-not classified	
Pyrophoric liquids-not classified	Germ cell mutagenicity-2	
Pyrophoric solids-not classified	Carcinogenicity-2	
Self-heating substances and mixtures-not classified	Toxic to reproduction-1A	
Substances and mixtures, which in contact with water, emit flammable gases-not classified	Effects on or via lactation-not classified	
Oxidizing liquids-not classified	STOT SE-1 (respiratory organs)	
Oxidizing solids-not classified	STOT RE-1 (respiratory organs, hematopoietic system, kidneys, central nervous system, peripheral nervous system, cardiovascular system, immune system)	
Organic peroxides-not classified	Aspiration hazard- not classified	
Corrosive to metals-not classified		

**Signal Word:** Danger

**Symbol :**



*Note: This product is generally not hazardous under normal conditions. But like any sealed container, battery may rupture when exposed to excessive heat and this could result in the release of flammable or corrosive materials which may cause irritation to respiratory tract, skin and eyes. The information below is given to minimize any possible hazard during handling, storage and disposal.*

**Hazard Statement**(for contact with leakage from rupture):

H303: May be harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H330: Fatal if inhaled.

H341: Suspected of causing genetic defects.

H351: Suspected of causing cancer.

H360: May damage fertility or the unborn child.

H370: Causes damage to organs (respiratory organs).

H372: Causes damage to organs (respiratory organs, hematopoietic system, kidneys, central nervous system, peripheral nervous system, cardiovascular system, immune system) through prolonged or repeated exposure.

H402: Harmful to aquatic life.

**Prevention Precautionary Statements**(for contact with leakage from rupture):

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P260: Do not breathe mist/vapours/spray

P264 : Wash hands thoroughly after handling.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.

P280 : Wear protective gloves/protective clothing/eye protection/face protection.

P281: Use personal protective equipment as required.

P284: Wear respiratory protection.

**Response Precautionary Statements**(for contact with leakage from rupture):

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363: Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351 P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310: Immediately call a POISON CENTER or doctor/physician.  
P320: Specific treatment is urgent.  
P307+P311: IF exposed: Call a POISON CENTER or doctor/physician.

**Storage precautionary statements :**

P403+P233: Store in a well-ventilated place. Keep container tightly closed.  
P405: Store locked up.

**Disposal precautionary statements :**

P501: Dispose of contents/container to relevant local and national regulations.

### 3. Composition/information on ingredients

**Product description:** substance (); preparation/mixture (√)

Ingredient (s)	CAS #	EC#	% by weight
Lead	7439-92-1	231-100-41	61%
Sulfuric Acid	7664-93-9	231-639-5	21%
Glass fibers	308066-84-4	--	3%
ABS	9003-56-9	--	13%
Epoxy resin	38891-59-7	--	2%

### 4. First aid measures

**As a general rule, in case of doubt or if symptoms persist, always call a doctor:**

**In the event of splashes or contact with eyes:** Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do-continue rinsing. If eye irritation persists: get medical advice/attention.

**In the event of splashes or contact with skin:** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

**In the event of exposure by inhalation:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

**In the event of swallowing:** Rinse mouth. Do not induce vomiting without professional instruction. Get medical attention if discomfort occurs.

**Acute effect and delayed effect:** Acute effect: The electrolyte causes severe skin burns and eye damage. Inhaling the vapour of the electrolyte is harmful and even fatal. Delayed effect: The electrolyte is suspected of causing cancer and genetic defects. It may damage fertility or the unborn child. It causes damage to organs (respiratory organs, hematopoietic system, kidneys, central nervous system, peripheral nervous system, cardiovascular system, immune system) through prolonged or repeated exposure.

**Personal protective equipment:** Wear protective gloves/protective clothing/eye protection/face protection.

### 5. Fire-fighting measures

**Extinguishing Media:** This product is not flammable, as for a fire caused by surrounding ignition sources, choose proper extinguishers according to fire types. Seek advice from local fire-fighting authority.

**Unsuitable Extinguishing Media:** Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

**Special Fire Fighting Procedures:** Structural firefighters must wear self-contained breathing apparatus and full protective

equipment.

**Unusual Fire and Explosion Hazards:** If involved in a fire, these products may ignite or decompose. Products of thermal decomposition can include produce toxic gases (e.g. carbon oxides, hydrogen sulfide, sulfuric dioxide).

**Special Fire-Fighting Method (This is for fire caused by other ignition sources):**

Fire-fighters must wear self-contained breathing apparatus and full protective equipment (e.g. fire-retardant clothing).

For initial fire, use dry powder, carbon dioxide, etc.

For large fire, it is effective to use fire foam, etc. to shut off air supply.

Deny unnecessary entry to the place around the fire.

Remove containers from fire area if it can be done without risk.

Cool surrounding facilities, etc. with water spray.

Extinguish fire from upwind, and the fire extinguishing method should be appropriate to the situation in the surroundings.

## 6. Accidental release measures

**Personal precautions:** Use proper personal protective equipment as indicated in Section 8.

**Measures for Cleaning/Collection:**

If this battery ruptures, do not touch the battery directly.

Wear protective gloves and sweep up leakage carefully.

Label the waste containers and dispose it in a proper way.

**Environmental Precautions:** Keep collected waste out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

**Additional Information:**

As for safe handling and storage, see Section 7.

As for personal protection, see section 8.

As for waste disposal, see section 13.

## 7. Handling and storage

**The regulations relating to storage remises apply to workshop where the product is handled :**

**Handling:**

Do not breathe vapors or fumes that may be evolved during processing.

Do not disassemble or burn batteries.

Do not squeeze or pierce batteries.

Do not put batteries into water.

Workers must wear proper protective equipment and must operate strictly according to relative rules.

**Storage:**

**Requirements to be met by storerooms and receptacles:** Do not store near flame or incompatible materials.

Keep battery terminals insulated when in storage or transportation. The temperature in the storeroom must be controlled in a proper range.

Avoid long-time direct contact of sunlight.

**Information about storage in one common storage facility:** T Not required.

**Further information about storage condition:** None.

## 8. Exposure controls/personal protection

### Control parameters:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Lead (CAS: 7439-92-1)	0.05mg/m <sup>3</sup>	0.05mg/m <sup>3</sup>
Sulfuric Acid (CAS: 7664-93-9)	1.0mg/m <sup>3</sup>	1.0mg/m <sup>3</sup>

### Engineering Control:

Handle the product only under conditions where sufficient ventilation is provided.

Use explosion-proof ventilation to control airborne levels of the product.

If ventilation is inadequate, wear suitable respiratory protective equipment.

Install eye washer and safety shower near handling and storage area.

Indicate the location of this facility with clear and prominent.

### Personal Protective Equipment (for workers):

#### Protection of Hands:

Recommend wearing protective gloves made of anti-corrosion materials.



#### Protection of Eyes:

No special requirements under normal conditions. Wear safety glasses when working in a dusty environment or liquid may splash.



**Respiratory Protection:** No special requirements under normal conditions. Wear appropriate respirators when vapour or fume is generated from processing.



#### Protection of Body:

Recommend wearing working clothing made of anti-corrosion materials.



### General protective and hygienic measures:

Wash hands before breaks and at the end of work.

Do not eat, drink or smoke when using this product.

Prevent vapour or fume from processing entering eyes.

## 9 Physical and chemical properties

General Information	
Form	Solid
Colour	The container is black
Odour	Odourless
pH Value	Not available
Boiling Range	No data available
Melting point/Melting range	No data available
Flash point	No data available
Flammable/Explosive Limits-Lower Vol %	Not applicable
Flammable/Explosive Limits-Upper Vol %	Not applicable
Density	Not applicable
Relative vapour density	Not applicable
Vapour pressure	Not applicable
Solubility in/Miscibility with Water	Not applicable
n-octanol/Water Partition Coefficient	Not applicable
Self-igniting Temperature	No data available
Decomposition Temperature	No data available
Odour Threshold Value	No data available
Evaporation Rate	No data available
Flammability (solid, gas, etc.)	This product is not classified as flammable solid.

## 10. Stability and reactivity

**Chemical stability:** Stable under normal temperatures and pressures.

**Possibility of hazardous reactions:** The electrolyte may react violently with strong oxidizing agents, strong base and halogens.

**Conditions to Avoid:** Avoid exposure or contact to extreme temperatures and combustible materials.

**Incompatible materials:** Avoid contact of strong oxidizing agent, acids, alkalis and halogens if batteries rupture.

**Hazardous decomposition products:** Products of thermal decomposition can include produce toxic gases (e.g .carbon oxides, hydrogen sulfide, sulfuric dioxide).

## 11. Toxicological information

**Product Toxicity Data:** The toxicity data of this product has not been determined by testing or research, but to our best knowledge and reference, this product is not toxic. The toxicity data shown below is for reference only.

Ingredients	CAS	LD 50/ LC 50 (Median lethal dose)
Sulfuric Acid	7664-93-9	Acute toxicity (Oral) : 2140 mg/kg ( rat) Acute toxicity (inhalation) : 0.347mg/l/4hours (rat) Data sources: SIDS (2001)
Lead	7439-92-1	Acute toxicity (Oral) >4,320mg/kg (rat)

**.Serious eye damage/eye irritation:** The electrolyte of this battery is classified into category 1. This product contains sulfuric acid (7664-93-9) which is classified as Category 1 by SIDS (2001). Considering the percentage of this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**.Skin corrosion/irritation:** The electrolyte of this battery is classified into category 1A. This product contains sulfuric acid (7664-93-9) which is classified as Category 1A by EU CLP. Considering the percentage of this ingredient exceeds the classification criteria, the whole product is classified as Category 1A.

**.Respiratory /Skin sensitizer:** No relevant classification.

**.Germ cell mutagenicity:** The electrolyte of this battery is classified into category 2. This product contains lead (7439-92-1) which is classified as Category 2 by ACGIH (7th, 2001). Considering the percentage of this ingredient exceeds the classification criteria, the whole product is classified as Category 2.

**.Carcinogenicity:** The ingredient lead is classified as Category A3 by ACGIH, Category 2B by IARC, Category 2 by NTP and known carcinogen by CP 65. As the percentage of this ingredient exceeds the classification criteria of this hazard, the whole product is classified as Category 2.

**.Reproductive Toxicity:** The electrolyte of this battery is classified into category 1A. This product contains lead (7439-92-1) which is classified as Category 1A by ACGIH (7th, 2001). Considering the percentage of this ingredient exceeds the classification criteria, the whole product is classified as Category 1A.

**.STOT-single exposure:** The electrolyte of this battery is classified into category 1 (respiratory organs). This product contains sulfuric acid (7664-93-9) which is classified as Category 1 by ATSDR (1998). Considering the percentage of this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**.STOT-repeated exposure:** The electrolyte of this battery is classified into category 1 (respiratory organs, hematopoietic system, kidneys, central nervous system, peripheral nervous system, cardiovascular system, immune system). This product contains sulfuric acid (7664-93-9) which is classified as Category 1 (respiratory organs) by SIDS (2001) and ATSDR (1998). Considering the percentage of this ingredient exceeds the classification criteria, the whole product is classified as Category 1(respiratory organs).

This product contains lead (7439-92-1) which is classified as Category 1 (hematopoietic system, kidneys, central nervous system, peripheral nervous system, cardiovascular system, immune system) by ACGIH (7th, 2001), EHC3(1977), PATTY (5th, 2001). Considering the percentage of this ingredient exceeds the classification criteria, the whole product is classified as Category 1.

**.Aspiration hazard:** No classification for this product.

**.Effects on or via lactation:** No classification for this product.

## 12. Ecological information

**Ecotoxicity:** No data available for the whole product. The data shown below is of the main ingredient.

Sulfuric Acid (CAS: 7664-93-9):

96-hour LC<sub>50</sub>=16-28mg/L of fishes (Bluegill) (SIDS, 2003).

**Persistence and Degradability:** No data available.

**Bioaccumulative Potential:** No data available.

**Mobility in Soil:** As for the sealed batteries, it can hardly move in soil. The electrolyte can move in soil due to its liquid nature.

**Results of PBT and vPvB Assessment:** No information available.

### General Notes:

Do not throw used product into ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

## 13. Disposal considerations

Minimize the hazard of waste by the methods of neutralization and stabilization.

Any disposal practice must be in compliance with country, local, state, and federal laws and regulations.

After contents are completely removed, dispose of its container at hazardous or special waste collection point.

Paste a label on the container indicating the possible hazards of the waste.

## 14. Transport Information

### DOT/ Air-Transportation- IATA/ICAO/Sea-Transportation-IMO/IMDG.:

**This product has passed Vibration test, Pressure differential test and Leakage test at 55 °C , so it is not classified as a dangerous goods.**

**Proper Shipping Name:** Not regulated

**Hazard Class:** Not applicable

**UN Code:** Not applicable

**Packing Group:** Not applicable

**Assigned Pictogram:** Not applicable

**Marine Pollutant (Yes/No):** No

**EMS NO.:** Not applicable

### Special precautions for user:

Check whether the package is completed or sealed before transporting; make sure no damage of packages and prevent goods from falling down during transporting; the transport vehicle should be equipped with facilities for fire-fighting and accidental release handling; do NOT transport this product together with incompatible substances; stay away from fire and areas of high temperature during stopovers.

## 15. Regulatory information

**Section 355 (extremely hazardous substances):** Not listed.

**SARA 313:** Lead (CAS: 7439-92-1) is listed in SARA 313 Toxic Release Chemicals.

**Toxic Substances Control Act (TSCA):** Except glass fibers (CAS: 308066-84-4) and epoxy resin (CAS: 38891-59-7), the other ingredients are listed in the TSCA inventory list.



**Clean Water Act:**

Lead (CAS: 7439-92-1) and Sulfuric Acid (CAS: 7664-93-9) are listed as Hazardous Substances under the CWA.

Lead (CAS: 7439-92-1) is listed as Priority Pollutants under the CWA.

**Carcinogenicity categories:** The ingredient lead is classified as Category A3 by ACGIH, Category 2B by IARC, Category 2 by NTP and known carcinogen by CP 65.

**Other relevant laws and regulations:**

**Candidate List of Substances of very high concern (SVHC) according to ECHA:** Not listed.

**REACH Regulation Annex XVII Regulation List:** Not listed.

**REACH Regulation Annex XIV Authorization List:** Not listed.

**Germany – WGK:** Not classified.

**(EC) 1272/2008 Annex VI Table 3.1 & 3.2 (67/548/EEC Annex I):**

Ingredient(s)	EC No. 1272/2008 Classification		67/548/EEC Classification
	CLASS. CODE	HAZARD CODE	
Sulfuric Acid (CAS: 7664-93-9)	Skin Corr. 1A	H314	R: 35 S: (1/2-)26-30-45

**Chemical Safety Assessment:** A Chemical Safety Assessment has not been carried out.

**16. Other information**

**DISCLAIMER:** Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**References:**

GHS Annex II

GHS SDS Instruction

ANSI Z400.1/Z129.1-2010

OSHA Hazard Communication Standard (HCS) 2012

**Full description of some acronyms:**

CAS-Chemical Abstracts Service

EINECS-European Inventory of Existing Commercial Chemical Substances

IMO-International Maritime Organization

IMDG-International Maritime Dangerous Goods

IATA-International Air Transport Association

ICAO-International Civil Aviation Organization

TSCA-Toxic Substance Control Act

OSHA-Occupational Safety and Health Administration

ACGIH- American Conference of Governmental Industrial Hygienists

EHC- Environmental Health Criteria

**ATSDR- ATSDR: Toxicological Profile**  
**SIDS- SIDS Initial Assessment Report**

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