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**CHANGXING HAIJIU  
BATTERY CO., LTD.**

## SAFETY DATA SHEET

Revision Date: Jan 01st, 2017

### SECTION 1: IDENTIFICATION

**Product Identifier:** Valve Regulated lead-acid battery  
**Other Product Name:** Valve Regulated Non-spillable battery  
Battery Non-spillable 49 CFR 173.159  
**Relevant Identified Uses:** Power Sport Batteries  
**Uses Advised Against:** Any Other Not Listed Above  
**Supplier :** Changxing Haijiu Battery.,Ltd.  
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### SECTION 2: HAZARDOUS IDENTIFICATION

**GHS Classification:**

Health	Environmental	Physical
Acute Toxicity – Not listed (NL) Eye Corrosion – Corrosive* Skin Corrosion – Corrosive* Skin Sensitization – NL Mutagenicity/Carcinogenicity – NL Reproductive/Developmental – NL Target Organ Toxicity (Repeated) – NL	Aquatic Toxicity – NL	NFPA – Flammable gas, hydrogen (during charging) CN - NL EU - NL

\*as sulfuric acid

## GHS Label: Valve Regulated Lead Acid Battery, Non-Spillable

Hazard Statements	Precautionary Statements
Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system, and skin.	Keep out of reach of children. Keep containers tightly closed. Avoid heat, sparks, and open flame while charging batteries. Avoid contact with internal acid.

**Emergency Overview:** May form explosive air/gas mixture during charging. Contact with internal components may cause irritation or severe burns. Irritating to eyes, respiratory system, and skin. Prolonged inhalation or ingestion may result in serious damage to health. Pregnant women exposed to internal components may experience reproductive/developmental effects.

### Potential Health Effects:

**Eyes:** Direct contact of internal electrolyte gel with eyes may cause severe burns or blindness.

**Skin:** Direct contact of internal electrolyte gel with the skin may cause skin irritation or damaging burns.

**Ingestion:** Swallowing this product may cause severe burns to the esophagus and digestive tract and harmful or fatal lead poisoning. Lead ingestion may cause nausea, vomiting, weight loss, abdominal spasms, fatigue, and pain in the arms, legs and joints.

**Inhalation:** Respiratory tract irritation and possible long-term effects.

### Acute Health Hazards:

Repeated or prolonged contact may cause mild skin irritation.

### Chronic Health Hazards:

Lead poisoning if persons are exposed to internal components of the batteries. Lead absorption may cause nausea, vomiting, weight loss, abdominal spasms, fatigue, pain in the arms, legs and joints.

Other effects may include central nervous system damage, kidney dysfunction, and potential reproductive effects. Chronic inhalation of sulfuric acid mist may increase the risk of lung cancer.

### Medical Conditions Generally Aggravated by Exposure:

Respiratory and skin diseases may predispose the user to acute and chronic effects of sulfuric acid and/or lead. Children and pregnant women must be protected from lead exposure. Persons with kidney disease may be at increased risk of kidney failure.

### Additional Information

No health effects are expected related to normal use of this product as sold.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Description of the mixture:

CAS No	EC No	% [weight]	Name	WHMIS Classifications	Classification according to CLP (1272/2008)
7439-92-1	231-100-4	60-78%	Lead	D2A	Xn, N, T; R20/22, R33, R50, R50/53, R53, R61, R62; Repr. Cat. 1, Repr. Cat. 3; S53, S45, S60, 231-100-4 S61 except those specified elsewhere in the annex
7664-93-9	231-639-5	5-25%	Sulfuric Acid	D1A, E(including >51%, <=51%)	C; R35; S1/2, S26, S30, S45
7440-36-0	231-146-5	0-0.1%	Antimony	Uncontrolled product according to WHMIS classification criteria; D1B(powder)	Xn, N; R20/22, R51/53; S2, S61 except tetroxide, pentoxide, trisulphide, pentasulphide, and those specified elsewhere in the annex
7440-31-5	231-141-8	0-0.2%	Tin	Uncontrolled product according to WHMIS classification criteria	Not Listed
7440-38-2	231-148-6	0-0.1%	Arsenic	D1A, D2A	T, N; R23/25, R50/53; S1/2, S20/21, S28, S45, S60, S61
7440-70-2	231-179-5	0-0.1%	Calcium	B6, E	F; R15; S2, S8, S24/25, S43

Case material composes 5-6% of the article. Case material includes the following components: 1- Propene, homopolymer (9003-07-0); Polystyrene (9003-53-6); Acrylonitrile, polymer with styrene (9003-54-7); Acrylonitrile, polymer with 1,3-butadiene and styrene (9003-56-9); Styrene polymer with 1,3-butadiene and styrene (9003-56-9); Styrene polymer with 1,3-butadiene (Kraton) (9003-55-8); Ethylene, chloro-, polymer (9003-86-2); Hard Rubber; Polycarbonate; Polyethylene.

## SECTION 4: FIRST AID MEASURES

**Eye Contact:** Flush eyes with large amounts of water for at least 15 minutes, get immediate medical attention if eyes have been exposed directly to acid.

**Skin Contact:** Flush affected area(s) with large amounts of water using deluge emergency shower, if available, shower for at least 15 minutes. Remove contaminated clothing. If symptoms persist, get medical attention.

**Ingestion:** If swallowed, give large amounts of water. Do NOT induce vomiting or aspiration into the

lungs may occur and can cause permanent injury or death.

**Inhalation:** If breathing difficulties develop, remove person to fresh air. If symptoms persist, get medical attention.

## SECTION 5: FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** CO<sub>2</sub>, dry chemical or foam

**Unsuitable Extinguishing Media:** Avoid using water

**Special Hazards Arising from the Substance or Mixture**

**Hazardous Combustion Products:** Lead portion of battery will likely produce toxic metal fume, vapor or dust.

**Advice for Fire-fighters:** If batteries are on charge, shut off power. Do not allow metallic materials to simultaneously contact negative and positive terminals of cells and batteries.

Wear a positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

**Additional Information:**

Highly flammable hydrogen gas is generated during charging and operation of batteries. Water applied to electrolyte generates heat and causes it to splatter.

## SECTION 6: ACCIDENTIAL 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:**

Prevent spilled material from entering sewers and waterways.

**Spill Containment & Cleanup Methods/Materials:**

Add neutralizer/absorbent to spill area. Sweep or shovel spilled material and absorbent and place in approved container. Dispose of any non-recyclable materials in accordance with local, state, national and international regulations.

## SECTION 7: HANDLING & STORAGE

**Spill or Leak Procedures:**

Stop flow of material, contain/absorb small spills with dry sand, earth, and vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of unneutralized acid to sewer.

**Handling and Storage:**

Store batteries in cool, dry, well-ventilated areas with impervious surfaces and adequate containment in the event of spills. Batteries should also be stored under roof for protection against adverse weather conditions. Separate from incompatible materials. Store and handle only in areas with adequate water supply and spill control. Avoid damage to containers. Keep away from fire, sparks and heat.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

Limit value type (country of origin)	Substance name	EC-No.	CAS-No	Limit value	Monitoring and observation processes
TWA(ACGIH USA) TWA (CA) TWA (FI) STEL(ME) TWA (ME) TWA (NIOSH USA)	Tin	231-141-8	7440-31-5	2 mg/m <sup>3</sup> 2 mg/m <sup>3</sup> 2 mg/m <sup>3</sup> 4 mg/m <sup>3</sup> 2 mg/m <sup>3</sup> 2 mg/m <sup>3</sup>	
STEL (CH) TWA (CH) TWA (ACGIH USA) TWA (CA) TWA (FI) TWA (JP) TWA(ME) TWA(NIOSH USA) TWA (OSHA USA)	Antimony	231-146-5	7440-36-0	1.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup> 0.5 mg/m <sup>3</sup>	
TWA (ACGIH) TWA (CA ON) STEL(CA QU) TWA(CA QU) STEL (CH) TWA(CH) STEL(FI) TWA(FI) Ceiling(DE) MAK(DE) Ceiling(JP) TWA(ME) TWA(NIOSH) TWA(OSHA)	Sulfuric Acid	231-639-5	7664-93-9	0.2 mg/m <sup>3</sup> 0.2 mg/m <sup>3</sup> 3 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 2 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 0.2 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup> peak 0.1 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 1 mg/m <sup>3</sup> 1 mg/m <sup>3</sup>	Thoracic fraction Thoracic  Inhalable fraction Inhalable fraction
TWA (ACGIH) TWA(CA ON)	Lead	231-100-4	7439-92-1	0.05 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup>	

TWA(CA QU) STEL(CH) TWA(CH) TWA(FI) Biological Limit Value(FI) TWA(JP) TWA(ME) TWA(NIOSH) TWA(OSHA)				0.05 mg/m <sup>3</sup> 0.15 (0.09) mg/m <sup>3</sup> 0.05(0.03)mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup> 1.4 umol/L 0.1 mg/m <sup>3</sup> 0.15 mg/m <sup>3</sup> 0.05 mg/m <sup>3</sup> 50 ug/m <sup>3</sup>	Designated substance regulation Dust (fume) Dust (fume)  Dust As Pb, dust and fume
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**Exposure Controls:** Store and charge in a well-ventilated area. General dilution ventilation is acceptable.

**Personal Protective Equipment:**

Pictograms:



**Eye/Face Protection:** Wear protective eyewear (goggles, face shield or safety glasses with side shields).

**Skin Protection:** Wear protective gloves.

No skin protection is ordinarily required under normal conditions of use. In accordance with industrial hygiene practices. If contact with leaking battery is expected, precautions should be taken to avoid skin contact. Under severe exposure or emergency conditions, wear acid resistant clothing and boots.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

COMPONENTS	DENSITY	MELTING POINT	SOLLUBILITY (H <sub>2</sub> O)	ODOR	APPEARANCE
Lead	11.34	327.4°C (Boiling)	None	None	Sliver-Gray Metal
Lead Sulfate	6.2	1070°C (Boiling)	40 mg/l (15°C)	None	White Powder
Lead Dioxide	9.4	290°C (Boiling)	None	None	Brown Powder
Sulfuric Acid	About 1.3	About 114°C (Boiling)	100%	Acidic	Clear Colorless Liquid
Fiberglass Sep.	N/A	N/A	SLIGHT	TOXIC	WHITE FIBROUS GLASS
ABS	N/A	N/A	NONE	NO ODOR	SOLID

## SECTION 10: STABILITY & REACTIVITY

<b>Component</b>	Sulfuric Acid
<b>Stability</b>	Stable at all temperatures
<b>Polymerization</b>	Will not polymerize
<b>Incompatibility</b>	Reactive metals, strong bases, most organic compounds
<b>Decomposition Products</b>	Sulfuric dioxide, trioxide, hydrogen sulfide, hydrogen
<b>Conditions to Avoid</b>	Prohibit smoking, sparks, etc. from battery charging area. Avoid mixing acid with other chemicals.

## SECTION 11: TOXICOLOGICAL INFORMATION

**Lead:** The toxic effects of lead are accumulative and slow to appear. It affects the kidneys, reproductive, and central nervous system.

The symptoms of lead overexposure are anemia, vomiting, headache, stomach pain (lead colic), dizziness, loss of appetite, and muscle and joint pain. Exposure to lead from a battery most often occurs during lead reclaim operations through the breathing or ingestion of lead dusts and fumes.

**Sulfuric Acid:** Sulfuric acid is a strong corrosive. Contact with acid can cause severe burns on the skin and in the eyes.

Ingestion of sulfuric acid will cause GI tract burns. Acid can be release if the battery case is damaged or if the vents are tampered with.

**Fiberglass Separator:** Fibrous glass is an irritant of the upper respiratory tract, skin and eyes. Please use the relative protection gears if necessary.

## SECTION 12: ECOLOGICAL INFORMATION

COMPONENTS	FLASHPOINT	EXPLOSIVE LIMITS	COMMENTS
Lead	None	None	
Sulfuric Acid	None	None	
Hydrogen		4% - 74.2%	Sealed batteries can emit hydrogen only if over charged(float voltage > 2.4VPC)
Fiberglass Sep.	N/A	N/A	Poisonous vapors may be released. Please wear self contained breathing apparatus in case of fire.
ABS	None	N/A	Temperatures over 300 °C (572°F) may release combustible gases. Wear positive pressure self contained breathing apparatus.

## **SECTION 13: DISPOSAL CONSIDERATIONS**

### **Waste Disposal Methods:**

Spent batteries: Send to secondary lead smelter for recycling.

Place neutralized slurry into sealed containers and handle as applicable with local, national and international regulations. Large water-diluted spills, after neutralization and testing, should be managed in accordance with approved local, national and international requirements. Consult state environmental agency and/or federal EPA.

## **SECTION 14. TRANSPORT INFORMATION**

### **Ground Transport- US-DOT/CAN-TDG/EU-ADR/APEC-ADR**

Proper Shipping Name: Not regulated as a Hazardous Material

### **Air Transport-ICAO-IATA**

Proper Shipping Name: Not regulated as a Hazardous Material

### **Sea Transport-IMO-IMDG**

Proper Shipping Name: Not regulated as a Hazardous Material

### **Additional Information:**

-Each battery and the outer packaging must be plainly and durably marked "Non-spillable" or "Non-spillable Battery"

-Non-Spillable Battery complies with the provisions listed in 49 CFR 173.159a; therefore, must not be marked with an Identification number or hazardous label and is not subject to hazardous shipping paper requirements.

-Transport requires proper packaging and paperwork, including the Nature and Quantity of goods, per applicable origin/destination/customs points as-shipped.

## **SECTION 15: REGULATORY INFORMATION**

### **INVENTORY STATUS:**

All components are listed on the TSCA; EINECS/ELINCS; and DSL, unless noted otherwise below.

### **U.S. FEDERAL REGULATIONS:**



**TSCA Section 8b – Inventory Status:** All chemicals comprising this product are either exempt or listed on the TSCA Inventory.

**TSCA Section 12b – Export Notification:** If the finished product contains chemicals subject to TSCA Section 12b export notification, they are listed below:

Chemical	CAS #
None	NA

**CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT)**

Chemicals present in the product which could require reporting under the statute:

Chemical	CAS #
Lead	7439-92-1
Sulfuric acid	7664-93-9

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

The finished product contains chemicals subject to the reporting requirements of Section 313 of SARA Title III.

Chemical	CAS #	% wt
Lead	7439-92-1	67
Sulfuric acid	7664-93-9	10

**CERCLA SECTION 311/312 HAZARD CATEGORIES:** Note that the finished product is exempt from these regulations, but lead and sulfuric acid above the thresholds are reportable on Tier II reports.

Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No
Immediate Hazard	Yes (Internal acid gel is Corrosive)
Delayed Hazard	No

Sulfuric Acid is regulated as an Extremely Hazardous Substance.

**STATE REGULATIONS (US):**

**California Proposition 65**

The following chemicals identified to exist in the finished product as distributed into commerce are known to the State of California to cause cancer, birth defects, or other reproductive harm:

Chemical	CAS #	% Wt
Arsenic (as arsenic oxides)	7440-38-2	<0.1
Strong inorganic acid mists including sulfuric acid	NA	10
Lead	7439-92-1	67

**California Consumer Product Volatile Organic Compound Emissions**

This Product is not regulated as a Consumer Product for purposes of CARB/OTC VOC Regulation.

sold for the intended purpose and into the industrial/Commercial supply chain.

**INTERNATIONAL REGULATIONS (Non-US):**

**Canadian Domestic Substance List (DSL)**

All ingredients remaining in the finished product as distributed into commerce are included on the Domestic Substances List.

**WHMIS Classifications**

Class E: Corrosive materials present at greater than 1%

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations

(CPR) and the MSDS contains all the information required by the Controlled Products Regulations.

**NPRI and Ontario Regulation 127/01**

This product contains the following chemicals subject to the reporting requirements of Canada NPRI +/-or Ont. Reg.127/01:

<b>Chemical</b>	<b>CAS #</b>	<b>% Wt</b>
Lead	7439-92-1	67
Sulfuric acid	7664-93-9	10

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

All ingredients remaining in the finished product as distributed into commerce are exempt from, or included on, the European Inventory of Existing Commercial Chemical Substances.

**European Communities (EC) Hazard Classification according to directives 67/548/EEC and 1999/45/EC.**

<b>R-Phrases</b>	<b>S-Phrases</b>
35, 36, 38	1/2, 26, 30, 45

**Additional Information**  
This product may be subject to Restriction of Hazardous Substances (RoHS) regulations in Europe and China, or may be regulated under additional regulations and laws not identified above, such as for uses other than described or asdesigned/ as-intended by the manufacturer, or for distribution into specific domestic destinations.

**SECTION 16: OTHER INFORMATION**

Changxing Haijiu Battery Co., Ltd. provides the information in this SDS in good faith. However Changxing Haijiu Battery Co., Ltd. makes no representations as to its comprehensiveness or accuracy. This date sheet is intended, as a guide, for the appropriate precautionary handling of the material by a properly trained person using it.

Individuals receiving this information must exercise their independent judgement in determining its appropriateness for a particular process. Changxing Haijiu Battery Co., Ltd. will not accept responsibility for damages resulting from use of reliance upon this information.