Safety Data Sheet (SDS)

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: Lead-acid Batteries (12V2.3AH) (12V5AH) (12V6AH) (12V7AH) (12V10AH) (12V12AH) (12V17AH) (12V20AH) (12V22AH) (12V24AH) (12V26AH) (12V33AH) (12V38AH) (12V40AH)

Recommended use of the chemical and restrictions on use: It is used for electric toy cars. Restrictions on use: Do NOT use it in an application which may contaminate food or do harm to human health.

Manufacturer/Supplier: Zhejiang Xiangrui Shanyang New Energy Co., Ltd.

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Further information obtainable from:

Information in case of emergency: +86-0575-88030533

2. Hazards identification

.GHS classification *(for contact with leakage from rupture)***:**

Physical hazards	Not classified
Health hazards	Skin corrosion/irritation - Category 1A
	Serious eye damage/eye irritation - Category 1
	Carcinogenicity - Category 1B
	Reproductive Toxicity - Category 1A, effects on or via lactation (Additional category)
Environmental hazards	Hazardous to the aquatic environment, acute hazard - Category 1
	Hazardous to the aquatic environment, long-term hazard - Category 1

Signal Word: Danger.

Pictograms:

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 hazardous materials. The information below is given to minimize any possible hazard during handling, storage and disposal.

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

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

H350: May cause cancer.

H360: May damage fertility or the unborn child.
H362: May cause harm to breast-fed children.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

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 dusts or mists.
P263: Avoid contact during pregnancy/while nursing.
P264: Wash hands thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P281: Use personal protective equipment as required.

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.
P310: Immediately call a POISON CENTER or doctor/physician.
P321: Specific treatment (Please see the specific measures for accident that included in the label, or go to hospital for treatment).
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P391: Collect spillage.

Storage precautionary statements:

P405: Store locked up.

Disposal precautionary statements:

P501: Dispose of contents/container according to relevant local and national regulations. (It is recommended to use incineration method to dispose of waste.)

3. Composition/information on ingredients

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

Ingredient (s)	CAS No.	EC No.	% by weight
Lead	7439-92-1	231-100-4	60
Sulfuric acid	7664-93-9	231-639-5	27
ABS resin	9003-56-9	618-371-8	10
Glass fiber	65997-17-3	266-046-0	2
Oxirane, (chloromethyl)-, homopolymer	24969-06-0	607-468-0	0.8
N-(2,4,5-Trichlorophenyl)acetamide	23627-24-9	245-793-6	0.1

Copper	7440-50-8	231-159-6	0.1

4. First aid measures

As a general rule, in case of doubt of if symptoms persist, always call a doctor *(for contact with leakage from rupture)***:**

In the event of splashes or contact with eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

In the event of splashes or contact with skin: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician. Wash contaminated clothing before reuse.

In the event of exposure by inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

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: Causes severe skin burns and eye damage. Causes serious eye damage.

Delayed effect: May cause cancer. May damage fertility or the unborn child. May cause harm to breast-fed children.

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

Indication of immediate medical attention and treatment needed, if necessary: Treat according to symptoms and exposure dose.

5. Fire-fighting measures

Extinguishing Media: Use dry chemical, CO_2 for extinction. Do not use direct water stream. Discharging cylinder shape water from fire hose may lead to spread fire to the surroundings.

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

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, protective equipment and emergency procedures: Use proper personal protective equipment as indicated in Section 8.

Environmental precautions: Keep cleaning run-offs out of municipal sewers and open bodies of water. Comply with local and national laws and regulations.

Methods and material for containment and cleaning up:

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.

7. Handling and storage

Precautions for safe handling:

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.

Conditions for safe storage, including any incompatibilities:

Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Incompatible substances or mixtures: No special requirement for this product. (Avoid contact of strong oxidizing agent, acids, alkalis and halogens if batteries rupture.)

Packing material: Cartons.

8. Exposure controls/personal protection

Control parameters:

Ingredients	OSHA PEL-TWA	ACGIH TLV-TWA
Lead (CAS: 7439-92-1)	0.05 mg/m^3	0.05 mg/m^3
Sulfuric acid (CAS: 7664-93-9)	0.1 mg/m^3 (ST) 3 mg/m^3	0.2 mg/m^3 (Thor.)
Copper (CAS: 7440-50-8)	1 mg/m^3	1 mg/m^3

Engineering Control:

Use this product only in closed systems fully or with local exhaust ventilation.
Install washer eyes and safety showers near to the handling and storage area.
Shows the location of these facilities, with a clear and prominent warning board.

Personal Protective Equipment (for workers):

Protection of Hands:

Recommend wearing protective gloves for industrial hygienic purpose.

Protection of Eyes:

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

Respiratory Protection:

No special requirements under normal conditions. Use an approved respirator if exposure limit is exceeded or if irritation or other symptoms occur.

Protection of Body:

Recommend wearing general working clothing.

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

9. Physical and chemical properties

General Information	
Form	Solid
Color	No data available
Odor	Odorless
Odor threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas, etc.)	Non-flammable
Upper/lower flammability or explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	No data available
Solubility (ies)	No data available
Partition coefficient: n-octanol/Water	No data available
Auto-ignition temperature	No data available

Decomposition temperature	No data available
Viscosity	No data available

10. Stability and reactivity

Chemical stability: Stable under normal temperatures and pressures.

Possibility of hazardous reactions: If leaked, the electrolyte may react violently with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

Conditions to Avoid: Heating, mechanical abuse and electrical abuse.

Incompatible materials: If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

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

Ingredients	**CAS No.**	**LD $_{50}$/ LC$_{50}$**
Lead	7439-92-1	Acute toxicity (Oral) LD$_{50}$＞2,000 mg/kg (rat) Data source: ECHA Acute toxicity (Dermal) LD$_{50}$＞2,000 mg/kg (rat) Data source: ECHA
Sulfuric acid	7664-93-9	Acute toxicity (Oral): 2140 mg/kg (rat) Data sources: ECHA
ABS resin	9003-56-9	No data available
Glass fiber	65997-17-3	No data available
Oxirane, (chloromethyl)-, homopolymer	24969-06-0	No data available
N-(2,4,5-Trichlorophenyl)acetamide	23627-24-9	No data available
Copper	7440-50-8	Acute toxicity (Oral) LD$_{50}$＞2,500 mg/kg (rat) Data source: ECHA Acute toxicity (Dermal) LD$_{50}$＞2,000 mg/kg (rat) Data source: ECHA
Classification of the whole product:		Not classified

Skin corrosion/irritation *(for contact with leakage from rupture)***:**	Sulfuric acid (CAS: 7664-93-9): Category 1A (Data source: CLP) Classification of the whole product: Category 1A
Serious eye damage/eye irritation *(for contact with leakage from rupture)***:**	Sulfuric acid (CAS: 7664-93-9): Category 1 (Data source: CLP) Classification of the whole product: Category 1
Respiratory sensitizer *(for contact with leakage from rupture)***:**	No classification for this product.
Skin sensitizer *(for contact with leakage*	No classification for this product.

from rupture):	
Germ cell mutagenicity *(for contact with leakage from rupture)*:	No classification for this product.
Carcinogenicity *(for contact with leakage from rupture)*:	Glass fiber (CAS: 65997-17-3): Category 1B (Data source: ECHA) Classification of the whole product: Category 1B
Reproductive Toxicity *(for contact with leakage from rupture)*:	Lead (CAS: 7439-92-1): Category 1A, effects on or via lactation (Additional category) (Data source: CLP) Classification of the whole product: Category 1A, effects on or via lactation (Additional category)
Specific target organ toxicity, single exposure *(for contact with leakage from rupture)*:	No classification for this product.
Specific target organ toxicity, repeated exposure *(for contact with leakage from rupture)*:	No classification for this product.
Aspiration hazard *(for contact with leakage from rupture)*:	No classification for this product.

12. Ecological information

Ecotoxicity *(for contact with leakage from rupture)*:

Lead (CAS: 7439-92-1):

96h-LC_{50}: 0.107 mg/L, Fish (Oncorhynchus mykiss) (Data source: ECHA)

30d-NOEC: 0.0293 mg/L, Fish (Pimephales promelas) (Data source: ECHA)

Hazardous to the aquatic environment, acute hazard - Category 1 (Data source: CLP)

Hazardous to the aquatic environment, long-term hazard - Category 1 (Data source: CLP)

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

96h- LC_{50}＞16-＜28mg/L, fish (Lepomis macrochirus) (ECHA)

Glass fiber (CAS: 65997-17-3):

96h-LC_{50}＞1,000 mg/L, Fish (Danio rerio) (Data source: ECHA)

Copper (CAS: 7440-50-8):

12d-NOEC: 0.123 mg/L, Fish (Atherinops affinis) (Data source: ECHA)

Hazardous to the aquatic environment, long-term hazard - Category 2 (Data source: CLP)

Classification of the whole product:

Hazardous to the aquatic environment, acute hazard - Category 1

Hazardous to the aquatic environment, long-term hazard - Category 1

Persistence and Degradability: No data available.

Bioaccumulative Potential: No information available.

Mobility in Soil: No information available.

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

It is recommended to use incineration method to dispose of waste.
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.:

Area	Method	Organization	Special Provision
International	**Air**	**IATA, ICAO**	**SP A67**
International	**Marine**	**IMDG**	**Chapter 3.3, item 238**
U.S.A	**Rail, Road, Marine**	**DOT**	**DOT 49 CFR 173.159(d)**

NOTE: This product has passed the vibration test, pressure differential test and leakage test at 55℃, so it is not regulated as dangerous goods during transport.

Proper Shipping Name: Not applicable
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

.United States:

Section 355 (extremely hazardous substances): Sulfuric acid (CAS: 7664-93-9).
SARA 313: Lead (CAS: 7439-92-1), Sulfuric acid (CAS: 7664-93-9), Copper (CAS: 7440-50-8).
Toxic Substances Control Act (TSCA):

Chemical Name	CAS No.	TSCA Inventory
Lead	7439-92-1	Listed
Sulfuric acid	7664-93-9	Listed
ABS resin	9003-56-9	Listed
Glass fiber	65997-17-3	Listed
Oxirane, (chloromethyl)-, homopolymer	24969-06-0	Listed

N-(2,4,5-Trichlorophenyl)acetamide	23627-24-9	Not listed
Copper	7440-50-8	Listed

Clean Water Act:

Chemical Name	CWA - Reportable Quantities	CWA - Hazardous Substances	CWA - Priority Pollutants	CWA - Toxic Pollutants
Lead (CAS: 7439-92-1)	4.54 kg	Listed	Listed	Listed
Sulfuric acid (CAS: 7664-93-9)	454 kg	Listed	Not listed	Not listed
Copper (CAS: 7440-50-8)	2270 kg	Listed	Listed	Listed

Carcinogenicity categories: Lead (CAS: 7439-92-1): ACGIH-A3, IARC-2B, NTP-2, CP65.

Other relevant laws and regulations:

Candidate List of Substances of very high concern (SVHC) according to ECHA: Lead (CAS: 7439-92-1).

REACH Regulation Annex XVII Regulation List: Lead (CAS: 7439-92-1).

REACH Regulation Annex XIV Authorization List: Not listed.

Germany – WGK: WGK-3.

(EC) 1272/2008 Annex VI Table 3.1:

Ingredient (s)	EC No. 1272/2008 Classification	
	CLASS. CODE	HAZARD CODE
Lead (CAS: 7439-92-1)	Repr. 1A Lact. Aquatic Acute 1 Aquatic Chronic 1	H360FD H362 H400 H410
Sulfuric acid (CAS: 7664-93-9)	Skin Corr. 1A	H314
Copper (CAS: 7440-50-8)	Aquatic Chronic 2	H411

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 Substances Control Act
OSHA-Occupational Safety and Health Administration
ACGIH- American Conference of Governmental Industrial Hygienists
ECHA- European Chemicals Agency

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**********The End**********