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CNAS IB0071



NO.2621120019

SAFETY DATASHEET

Product Name: LR03 AAA ALKALINE BATTERY 1.5V

Effective Date: 2022-01-01

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Shanghai Institute of Chemical Industry Testing Co., Ltd.



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ZHEJIANG MUSTANG BATTERY CO.,LTD.

SAFETY DATA SHEET

LR03 AAA ALKALINE BATTERY 1.5V

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: LR03 AAA ALKALINE BATTERY 1.5V
Company: ZHEJIANG MUSTANG BATTERY CO.,LTD.
Address: NO.818, Rongji Road, Luotuo Street, Zhenhai District, Ningbo City, Zhejiang Province, 315202, P.R.China
Email: lxj@mustangbattery.com
Fax: 86-574-86593223
Emergency Phone: 86-574-86653777
Recommend use of the chemical and restrictions on use: /

SDS Number: 2621120019
Effective Date: 2022-01-01

SECTION2 HAZARDS IDENTIFICATION

The product is outside of the scope of GHS system.

Main Hazards:

Health Hazards:

The internal materials of battery are corrosive to the eyes and skin. Avoid directly inhaling and contacting with the internal materials of battery.

Environmental Hazards:

The internal materials of battery may be harmful to the environment. Pay attention to water system.

SECTION3 INFORMATION ON INGREDIENTS

Product name: LR03 AAA ALKALINE BATTERY 1.5V

| Ingredient | Concentration | CAS No. | EC No. |
|-------------------|---------------|-----------|-----------|
| Manganese dioxide | 30-38% | 1313-13-9 | 215-202-6 |
| Iron | 15-25% | 7439-89-6 | 231-096-4 |
| Zinc | 10-20% | 7440-66-6 | 231-175-3 |

| | | | |
|--------------------------|----------|------------|-----------|
| Water | 7-11% | 7732-18-5 | 231-791-2 |
| Potassium hydroxide | 4-8% | 1310-58-3 | 215-181-3 |
| Copper | 2-5% | 7440-50-8 | 231-159-6 |
| Graphite | 2-3% | 7782-42-5 | 231-955-3 |
| Polyvinyl Chloride (PVC) | 1-2% | 9002-86-2 | 618-338-8 |
| Nylon | 0.8-2% | 63428-84-2 | 805-352-6 |
| Aluminum | 0.1-0.5% | 7429-90-5 | 231-072-3 |

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If in contact with the internal materials of battery, remove the contaminated clothing, shoes and socks, immediately flush with plenty of water for at least 20 minutes. Call a physician.

Eye Exposure:

If in contact with the internal materials of battery, lift your eyelids immediately and rinse them with running water for more than 20 minutes. Call a physician.

Inhalation Exposure:

If the internal materials of battery are inhaled, immediately remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Call a physician.

Oral Exposure:

Do not induce vomiting if the internal materials of battery are swallowed. Call a physician immediately.

Most Important Symptoms/Effects, Acute and Delayed:

No data available.

Indication of Immediate Medical Attention and Special Treatment Needed, if Necessary:

No data available.

SECTION5 FIRE FIGHTING MEASURES

Suitable Extinguishing Media:

Suitable: Dry chemical, Carbon dioxide and appropriate foam.

Specific Hazards Arising from the Chemical:

The battery may leak liquid, leak gas or explode. The leaking electrolyte may be corrosive. Under the conditions of short circuits, overcharging, over-discharging, puncture, squeezing, and exposing the battery over the maximum rated temperature specified by manufacture, the battery may burn or explode.

Special Protective Action for Fire-fighters:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Fire-extinguishing work is done from the windward. Uninvolved persons should evacuate to a safe place.

SECTION6 ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:

Use personal protective equipment. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Entry to noninvolved personnel should be controlled around the leakage area by roping off. Remove all sources of ignition.

Environmental Precautions:

Avoid leakage getting into the earth, ditches or waters. Avoid directly releasing the washing waste-water into the environment.

Methods and Materials for Containment and Cleaning up:

If the electrolyte leaks, use dry soil, dry sand or other non-combustible materials to absorb and cover the leakage. Sweep up with spade and transfer to a dry, clean, lidded container for disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION7 HANDLING AND STORAGE**Precautions for Safe Handling:**

Operators should be trained and strictly abide by operating procedures. Wear appropriate protective clothing and safety gloves. Avoid inhaling and contacting with the internal materials of battery. Handling is performed in a well ventilated place. No smoking at working site. Incompatibilities: strong oxidizing agents, corrosives. If it is not intend to do, the battery should not be short-circuited, overcharged, over-discharged, punctured and crushed. Do not expose the battery over the maximum rated temperature specified by manufacture.

Conditions for Safe Storage, Including Any Incompatibilities:

Store in a cool, dry, and well-ventilated area. Keep away from ignition sources, heat and flame. Store in a tightly closed container. Incompatibilities: strong oxidizing agents, corrosives. The battery must be firmly packed in inner packaging so as to effectively prevent short circuits and short circuits caused by movement. Storage place should be equipped with appropriate varieties and quantities of fire fighting equipment and leakage emergency treatment equipment.

SECTION8 EXPOSURE CONTROL/PPE**Control Parameters:**

GBZ 2.1-2019 Occupational Exposure Limits for Hazardous Agents in the Workplace - Part 1: Chemical Hazardous Agents:

Manganese and its inorganic compounds (calculated as MnO_2): PC-TWA 0.15 mg/m^3

Graphite dust: PC-TWA 4 mg/m^3 (Total dust); PC-TWA 2 mg/m^3 (Inhalable dust)

Potassium hydroxide: MAC 2 mg/m^3

Copper: Copper dust PC-TWA 1 mg/m^3 ; Copper smoke PC-TWA 0.2 mg/m^3

Aluminum metal and aluminum alloy dust: PC-TWA 3 mg/m^3 (total dust)

ACGIH:

Manganese dioxide: TLV-TWA 0.2 $mg (Mn) /m^3$

Graphite: TLV-TWA 2 mg/m^3

Potassium hydroxide: TLV-CL 2 mg/m^3

Copper: TLV-TWA 1 $mg (Cu) /m^3$, dust, mist TLV-TWA 0.2 $mg (Cu) /m^3$, fume

Aluminum: TLV-TWA: 1 $mg/m^3 (R)$

Appropriate Engineering Controls:

Mechanical exhaust required. Safety shower and eye bath.

Individual Protection Measures:**Eye/Face Protection:**

Wear chemical safety glasses if needed.

Skin Protection:

Hand Protection: Wear safety gloves. Body Protection: Wear appropriate protective clothing.

Respiratory Protection:

Wear government approved respirator if needed.

Thermal Hazards:

No data available.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES**Appearance:** Multicolor plastic film shell**Odor:** Odorless**pH Value:** 11-12**Solubility:** Partial soluble in water**Boiling Point,** No data available**Initial Boiling****Point and Boiling****Range:****Melting** >300°C**Point/Freezing****Point:****Flash Point** No data available**(Closed Cup):****Density/Relative** No data available**Density:****Kinematic** No data available**Viscosity:****Lower/Upper** No data available**Explosion****Limit/Flammabili****ty Limit:****Vapour Pressure:** No data available**Relative Vapor** No data available**Density:****Partition** No data available**Coefficient****N-Octanol/Water(****Log Value):****Autoignition** No data available**Temperature:****Decomposition** No data available**Temperature:****Particle** No data available**Characteristics:****Flammability** No data available**(Solid, Gas):****SECTION10 STABILITY AND REACTIVITY****Reactivity:**

No data available.

Chemical Stability:

Stable under normal temperatures and pressures.

Possibility of Hazardous Reactions:

No data available.

Conditions to Avoid:

Avoid exposure the battery over the maximum rated temperature specified by manufacture. Avoid charging, over-discharging, puncture, squeezing, short circuits and short circuits caused by movement.

Incompatible Materials:

Strong oxidizing agents, corrosives.

Hazardous Decomposition Products:

Carbon oxides, zinc and manganese oxides, etc.

SECTION11 TOXICOLOGICAL INFORMATION

Acute Toxicity:

No data available.

Skin Corrosion/Irritation:

The electrolyte in the battery causes severe skin burns.

Serious Eye Damage/Irritation:

The electrolyte in the battery causes serious eye damage.

Respiratory Sensitization:

No data available.

Skin Sensitization:

No data available.

Carcinogenicity:

No data available.

Germ Cell Mutagenicity:

No data available.

Reproductive Toxicity:

No data available.

Specific Target Organ Toxicity -Single Exposure:

No data available.

Specific Target Organ Toxicity -Repeated Exposure:

No data available.

Aspiration Hazard:

No data available.

SECTION12 ECOLOGICAL INFORMATION

Toxicity:

No data available.

Persistence and Degradability:

No data available.

Bioaccumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION13 DISPOSAL CONSIDERATION

Disposal Methods:

The discarded battery is listed in "Catalogue of Hazardous Waste", Number: HW23, Category: Zinc-containing Waste.

The disposal of discarded battery shall comply with the requirements of relevant laws, regulations, policies and standards such as the "Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Waste" and "Technical Policy for the Prevention and Control of Waste Battery Pollution". Contact a licensed professional waste disposal service to dispose of wastes. Used battery being transported for disposal or reclamation should be carefully checked prior to shipment to ensure the integrity of each battery and its suitability for transport.

SECTION14 TRANSPORT INFORMATION

RID/ADR (2021 Edition) : The product is not subject to RID/ADR (2021 Edition) .

IATA DGR (63rd Edition) : The product is not subject to IATA DGR (63rd Edition) according to special provision A123.

IMO IMDG CODE (2020 Edition) : The product is not subject to IMO IMDG CODE (2020 Edition) .

SECTION15 REGULATORY INFORMATION

Domestic Regulations:

Regulations Concerning Road Transportation of Dangerous Goods (JT/T 617-2018) :

The product is not subject to JT/T 617-2018.

List of Dangerous Goods (GB 12268-2012) :

The product is not subject to GB 12268-2012.

List of Dangerous Goods by Rail (2009 Edition) :

The product is not subject to List of Dangerous Goods by Rail (2009 Edition) .

International Regulations:

Directive 2006/66/EC and 2013/56/EU:

The label, disposal and recycling of the battery shall meet the requirements of EU Directive 2006/66/EC and 2013/56/EU.

SECTION16 OTHER INFORMATION

Preparation Date:

2022-01-01

Preparation Department:

Shanghai Research Institute of Chemical Industry Testing Co., Ltd.

Tel (Fax) :+86-21-52815377/31765555

Revision:

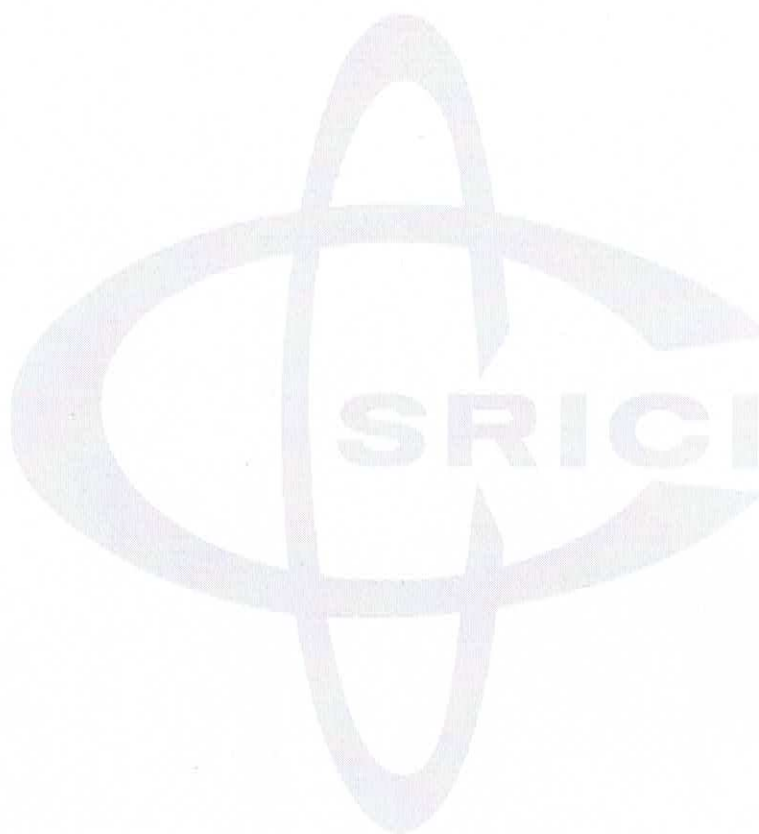
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Abbreviations and Acronyms:

CAS: Chemical Abstracts Service EC: European Commission PC-TWA: Permissible concentration-time weighted average MAC: Maximum allowable concentration TLV-TWA: Threshold limit value-time weighted average TLV-CL: Threshold limit value-ceiling limit ACGIH: American Conference of Governmental Industrial Hygienists RID: Regulations concerning the International Carriage of Dangerous Goods by Rail ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road IATA DGR: International Air Transport Association Dangerous Goods Regulations IMO IMDG CODE: International Maritime Organization International Maritime Code for Dangerous Goods EU: European Union

Other Information:

This SDS is compiled based on the information such as ingredients provided by the applicant and our current knowledge. This SDS shall be used only as a guide. The users of this SDS must make independent judgments on the correctness and completeness and then decide its suitability according to the actual situation. The users should take the relevant legal responsibilities for the consequences of use.



SUPER POWER ALKALINE

AAA
SIZE 1.5V
LR03 AM4

CAUTION: DO NOT RECHARGE, DISASSEMBLE, DISPOSE
OF IN FIRE, PUT IN A REFRIGERATOR OR WITH OTHER
OTHER BATTERY TYPES - MAY EXPLODE OR LEAK AND
CAUSE PERSONAL INJURY.

AAA
SIZE 1.5V
LR03 AM4

CAUTION: DO NOT RECHARGE, DISASSEMBLE, DISPOSE
OF IN FIRE, PUT IN A REFRIGERATOR OR WITH
OTHER BATTERY TYPES - MAY EXPLODE OR LEAK AND
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Raymax

AAA
SIZE 1.5V
LR03 AM4

CAUTION: DO NOT RECHARGE, DISASSEMBLE, DISPOSE
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CAUSE PERSONAL INJURY.

AAA
SIZE 1.5V
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CAUTION: DO NOT RECHARGE, DISASSEMBLE, DISPOSE
OF IN FIRE, PUT IN A REFRIGERATOR OR WITH
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