

# MSDS Report

ACCREDITATION CERTIFICATE OF CHINA NATIONAL  
ACCREDITATION BOARD FOR LABORATORIES (No. CNAS L3192)

Samples BATTERY (LR03)

Client Unit SHENZHEN TIANXIANGRUI INDUSTRIAL  
CO., LTD

Client Address Room 515/Building A, Huafeng Science Park,  
Xinhu Road, No.82, Bao'An District, Shenzhen  
City, Guangdong, China.

Pony Testing International Group  
<http://www.ponytest.com>



## Material Safety Data Sheet

### Section 1 - Chemical Product and Company Identification

**Product Name:** BATTERY (LR03)

**Sample Code:** LR03

**Manufacture:** SHENZHEN TIANXIANGRUI INDUSTRIAL CO., LTD.

**Address:** Room 515/Building A, Huafeng Science Park, Xinhua Road, No.82,  
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### Section 2 - Composition/Information on Ingredient

Chemical name	In % by Weight	CAS No.
Manganese dioxide	40	1313-13-9
Zinc	16	7440-66-6
Potassium hydroxide (liquid)	18	1310-58-3
Lead	<0.003	7439-92-1
Mercury	<0.0001	7439-97-6
Cadmium	<0.0003	7440-43-9
Steel	19	12597-69-2
Polypropylene	1.5	9003-07-0
Copper	4	7440-50-8

### Section 3 - Hazards Identification

**No specific health hazards under normal use.**

**Routes of Entry**

Eyes, Skin, Inhalation, Ingestion.

**Health Hazards**

These chemicals are contained in a sealed can. Risk of exposure occurs only if the battery is mechanically or electrically abused. The most likely risk is acute exposure when a battery vents. Leaking material exposure to skin, eyes may cause irritation. Inhalation of fumes may cause respiratory irritation.

**Sign/Symptoms of Exposure**

May be a reproductive hazard. Leaking can cause thermal and chemical burns upon contact with the skin.

**Section 4 - First Aid Measures****Eyes**

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin**

Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.

**Inhalation**

Remove from exposure and move to fresh air immediately. Use oxygen if available.

**Ingestion**

Do not induce vomiting. Call a physician immediately.

**Section 5 - Fire Fighting Measures**

**Flash Point:** N/A.

**Auto-Ignition Temperature:** N/A.

**Extinguishing Media**

Water, CO<sub>2</sub>, dry chemical.

**Firefighting**

In case of fire in an adjacent area, use water, CO<sub>2</sub> or dry chemical extinguishers if batteries in their original containers since the fuel of the fire is basically paper products. For bulk quantities of unpackaged batteries use suitable extinguishers. In this case, do not use water.

**Section 6 - Accidental Release Measures****Steps to be taken in case Material is Released or Spilled**

If the battery is accidentally broken and leaks out, wipe it up with a cloth, and

dispose of it in a plastic bag and put into a steel can.

The preferred response is to leave the area and allow the batteries to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled material with absorbent.

**Waste Disposal Method**

It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental protection agency and/or federal EPA.

**Section 7 - Handling and Storage**

The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container.

Do not short circuit terminals, or charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.

**Precautions to be taken in handling and storing**

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.

**Other Precautions**

Do not short or install with incorrect polarity.

**Section 8 - Exposure Controls, Personal Protection****Respiratory Protection**

In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting batteries. Respiratory Protection is not necessary under conditions of normal use.

**Other Protective Clothing or Equipment**

Not necessary under conditions of normal use.

Personal Protection is recommended for venting batteries: Respiratory Protection, Protective Gloves, Protective Clothing and Safety Glass with side shields.

## Section 9 - Physical and Chemical Properties

**Nominal Voltage:** 1.5V

**Appearance characters:** Black-gray, odorless, quadrate battery.

## Section 10 - Stability and Reactivity

### **Stability**

Stable for normal.

### **Conditions to Avoid**

Heating, fire, mechanical abuse and electrical abuse.

### **Hazardous Decomposition Products**

When exposed to fire or extreme heat, batteries may emit toxic fumes.

## Section 11 - Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened. Exposure to internal contents, the corrosive fumes will be irritation to skin, eyes and mucous membranes. Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

### **Manganese Dioxide**

Acute oral toxicity LD50 (Rat) : >3478 mg/kg

### **Zinc**

Skin: 300ug/3 Days. Reaction: Mild.

### **Potassium hydroxide**

Acute oral toxicity LD50 (Rat): 273 mg/kg

## Section 12 - Ecological Information

When promptly used or disposed the battery does not present environmental hazard. When disposed, keep away from water, rain and snow.

## Section 13 - Disposal Considerations

### **Appropriate Method of Disposal of Substance or Preparation**

Dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency.

## Section 14 - Transport Information

These batteries are exempt from dangerous goods. They are considered non-dangerous goods by the international Civil Aviation Organization (ICAO) and the International Air Transport Association (IATA).

Separate batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport.

**Transport Fashion:** By air, by sea, by railway, by highway.

**Packaging Information:** Carton.

## Section 15 - Regulatory Information

### Law Information

《Dangerous Goods Regulation》  
《Recommendations on the Transport of Dangerous Goods Model Regulations》  
《International Maritime Dangerous Goods》  
《Technical Instructions for the Safe Transport of Dangerous Goods》  
《Classification and code of dangerous goods》  
OSHA Hazard Communication Standard Status  
Toxic Substances Control Act (TSCA) Status  
SARA Title III  
RCRA  
California Proposition 65  
European/International Regulations  
U.S. Federal Regulations  
In accordance with all Federal, State and Local laws.

## Section 16 - Additional 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 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

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