

# *XINGGUANG BATTERY MATERIAL CO., LTD.*

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## **Safety Data Sheet (SDS)**

### Section I –Product Information

**Our brands: SUNKING, SUNCOM, MINCELL, ACCELL, KOMAX**

Manganese Dioxide Alkaline

Button-cells (LR44)

### Section II – Composition / Information on Ingredients

The ingredients are contained in a hermetically-sealed case, designed to withstand temperatures and pressures encountered during normal use , As a result ,during normal use , hazardous materials are partially contained inside the battery .The battery should not be opened or exposed to heat because exposure to the following ingredients contained within could be harmful under some circumstances.

The following information only. The chemical names are as follow :

Zinc (zn) **11wt%**

Manganese Dioxide (**MnO<sub>2</sub>**) **32wt%**

Potassium hydroxide (**KOH**) **4wt%**

Water (H<sub>2</sub>O) **5wt%**

Iron (Fe) **42wt%**

Graphite (C) **4wt%**

Polyamide (PA) **2wt%**

### Section III – Physical / Chemical Characteristics

Boiling Point (° C) :N/A

Specific Gravity: (H<sub>2</sub>O=1):N/A

Vapor Pressure (mmHg): (N/A)

Vapor Density (Air=1): (N/A)

Melting Point (° C) : (N/A)

Evaporation Rate (Butyl Acet.=1) : (N/A)

Solubility in Water: (N/A)

Appearance and Odor: (N/A)

## Section IV - Fire and Explosion Hazard Data

**Flammable Limits:** Not available

But when the short circuit occurred inside the battery due the leakage or the breach of the separator, it may cause a tiny explosion to break and spread the anode and cathode into parts and hit the person nearby. It may hurt the eye by accident. Safety precaution must be taken against this accident.

In case of fire, it is permissible to use any kind of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Unusual Fire and Explosion Hazards are not available.

## Section V - Health Hazard Data

Under normal conditions of use, the battery is hermetically sealed. When heated, battery may emit hazardous gas of KOH and Hg.

<b>Routes of Entry:</b>	<b>Method of prevention</b>
Inhalation - Yes.	Remove to fresh air.
Skin - Yes.	Flush with water.
Ingestion - Yes.	Obtain medical attention.

### **Health Hazards (Acute):**

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 that the contaminated skin will be itchy and eye will be slightly irritated in case of the electrolyte leakage.

Carcinogenicity: NTP: None IARC Monograph: None OSHA Regulated: None

**Medical Conditions Generally Aggravated by Exposure:** An acute exposure will not generally aggravate any medical condition.

**Emergency and First Aid Procedures:** In case of skin contact with contents of battery, flush immediately with water. For eye contact, flush with copious amounts of water for 15 minutes. Do not inhale leaked material. If irritation persists, get medical help immediately.

## Section VI- Reactivity Data

**Stability:** Stable

**Conditions to Avoid:** Do not heat, disassemble or charge.

**Hazardous Decomposition or By- products:** N/A

Hazardous polymerization will not occur.

## Section VII- First Aid Measures

**Ingestion:** Do not induce vomiting or give food or drink. Seek medical attention immediately. Call National Battery Ingestion Hotline for advice.

**Inhalation:** Provide fresh air and seek medical attention.

**Skin Contact:** Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

**Eye Contact:** Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower lids, until no evidence of chemical remains. Seek medical attention.

## **Section VIII- Accident Release or Spillage**

### **To Cleanup leaking battery:**

**Ventilation Requirements:** Room ventilation may be required in areas where there are open or leaking batteries.

**Eye Protection:** Wear safety glasses with side shields if handling an open or leaking battery.

**Gloves:** Use neoprene or natural rubber gloves if handling an open or leaking battery.

Battery materials should be collected in a leak proof container.

## **Section IX- Safe Handling and Storing**

**Precautions to be Taken in Handling and Storing:** Avoid mechanical or electrical abuse. Batteries may explode or cause burns, if disassembled, crushed to fire or high temperatures. Do not short or install with incorrect polarity or mix with used or other battery type, which may explode or leak and cause personal injury.

Store in a cool and dry, well ventilated area. Elevated temperatures can result in shortening battery life.

## **Section X- Exposure Controls/ Person Protection**

**Ventilation Requirements:** N.A.

**Respiratory Protection:** N.A.

**Eyes Protection:** N.A.

**Gloves:** N.A.

## **Section XI- Ecological Information: N.A.**

## **Section XII- Regulatory Information:**

Batteries are not classified as dangerous goods by US Department of

Transportation or the major international bodies and are therefore not regulated.

SARA/TITLE III- As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right to Know Act.

## **Section XIII Control Measures**

**Respiratory Protection (Specify Type):** Not necessary under conditions of normal use.

**Ventilation:** Not necessary under conditions of normal use.

**Protective Gloves:** Not necessary under conditions of normal use.

**Eye Protection:** Not necessary under conditions of normal use.

**Other Protective: Clothing or Equipment:** Not necessary under conditions of normal use.

## **Section XIV- Transportation**

**The manganese dioxide batteries have been tested strictly in accordance with the requirements contained in the UN Manual of Tests and Criteria and shipped in accordance with applicable regulations.**

Batteries have been packaged and offered for transportation in a good manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals) and protects against short circuits.

Sealed Alkaline batteries are not regulated for purposes of transportation with reference to requirements of

1. U.S. Department of Transportation (DOT), Special Provision 130, i.e. "Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals)"
2. International Civil Aviation Administration (ICAO) and International Air Transport Association (IATA), Special Provision A 123, i.e. "An electrical battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of terminals) is forbidden form transportation."
3. International Maritime Dangerous Goods Regulations (IMDG), Special Provision 304, i.e. "Batteries, dry, containing corrosive electrolyte which will not flow out of the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short- circuits."

XV- Regulatory Information

Special requirement be according to the local regulatories.

XVI-Other information

Do not heat or dispose of in fire. Do not recharge or disassemble the cell.

ON AND BEHALF OF  
FOSH NANHAI  
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