

## Alkaline Manganese Battery Cell

## Material Safety Data Sheet

## Material Safety Data Sheet for Alkaline Button Cell (LR) Series

Type No.:(**LR621、LR726、LR41、LR66、LR754、LR921、LR927、  
LR1120、LR936、LR1130、LR721、LR43、LR44**)Document Number: MSDS-LR Series **\*\*Not for recharge\*\*** (Version : 2013)

IDENTITY ( As used on Label and List )

Note : Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.

**SECTION I - Manufacturer Information**

Manufacturer's Name : Dongguan Tuobu Electronic Co.,Ltd.

Emergency &amp; Information Phone No: 86-769-82123428

Address :No.A,Building 6,Binhe Road,Tianxin Quarter,Huangjiang Town,Dongguan,  
Guangdong Province .China

Signature of Prepare (Optional)

**SECTION II - Hazardous Ingredients / Identity Information**

## IMPORTANT NOTE :

Use under normal conditions, the battery is hermetically sealed.

Ingestion: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract. IMMEDIATELY SEE DOCTOR.

Inhalation: Contents of an open battery can cause respiratory irritation.

Skin Contact: Contents of an open battery can cause skin irritation/ or chemical burns.

Eye Contact: Contents of an open battery can cause severe irritation and chemical burns.

Substance Name	Chemical Identification CAS#	% Weight
Zinc	7440 - 66 - 6	8%
Graphite	7782 - 42 - 5	3%
Manganese Dioxide	1313 - 13 - 9	30%
Potassium Hydroxide	1310 - 58 - 3	10%
Iron	7439 - 89 - 6	37%
Distilled Water	7732 - 18 - 5	11%
Others	N/A	Balance

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#### **SECTION III - Physical / Chemical Characteristics**

Boiling Point : N.A.

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

Melting Point : N.A.

Vapor Pressure (mm Hg) : N.A.

Vapor Density (AIR = 1) : N.A.

Evaporation Rate (Butyl Acetate) : N.A.

Solubility in Water : N.A.

Appearance and Odor , Button Shape, Odorless .

#### **SECTION IV - Control Fire Measures**

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

Fire fighters should wear self-contained breathing apparatus.

#### **SECTION V - Reactivity Data**

Stability:

Unstable Conditions to Avoid.

Hazardous Decomposition or Byproducts .

The Alkaline Button Battery do not meet any of the criteria established in 40 CFR 261.2 of reactivity .

#### **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 the chemical remains. Seek medical attention.

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#### **SECTION VIII - Accidental Release or Spillage**

To Cleanup leaking batteries:

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 - Handling and Storage**

Storage: Store in a cool, well ventilated area. Elevated temperatures can result in shortened battery life.

Mechanical Containment: If potting or sealing the battery in an airtight or watertight container is required, consult your Dongguan Tuobu Electronics representative for precautionary suggestions. Batteries normally evolve hydrogen which, when combined with oxygen from the air can produce a combustible or explosive mixture unless vented. If such a mixture is present, short circuits, high temperature, or static sparks can cause an ignition.

Do not obstruct safety release vents on batteries, Encapsulation(potting) of batteries will not allow cell venting and can cause high pressure rupture.

Handling: Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, metal covered tables or metal belts used for assembly of batteries into devices.

Charging: This battery is manufactured in a charged state. Its is not designed for recharging. Recharging can cause battery leakage or in some case, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards

#### **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 XIII - Regulatory Information:** Batteries are not classified as dangerous goods by US

Department of Transportation or the major international regulatory 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.

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#### **SECTION XIV - Transport Information**

The Batteries in all forms of transportation (e.g. Truck, air, or sea) must be packaged in a safe and responsible manner. Regulatory concerns from all agencies for safe packaging require that batteries be packaged in a manner that prevents short circuits and be contained in (Strong Carton / Packaging) that prevents spillage of contents.

Alkaline battery (sometime referred to as "Dry Cell" are not listed as dangerous goods under the ADR European Agreement Concerning the International Carriage of Dangerous Goods by Road, The IMDG International Maritime Dangerous Goods Code, UN Dangerous Good Regulations, IATA Dangerous Goods Regulation, ICAO Technical Instructions and the U.S. hazardous materials regulations (49 CFR). These batteries are not subject to the dangerous goods regulations provided they meet the requirement contained in the following special provisions.

#### Regulatory Parties

ADR

IMDG

UN, ICAO

US DOT

IATA,

#### Special Provisions

Not Regulated

Not Regulated

Not Regulated

49 CFR 172.102 Provision 130

A123,

Ref: Summary of Packing Instruction (IATA Dangerous Goods Regulations 54<sup>st</sup> Edition) the minimum requirements necessary to transport as non-restricted goods are as follows

**\*\*All Alkaline Batteries are packed in such a way to prevent short circuits or the generation dangerous quantities of heat and meet the special provisions listed above. In addition, The IATA Dangerous Goods Regulations ICAO Technical Instructions require the words "Not Restricted" and the Special Provision No: A123 be provided on the air waybill, when an air waybill is issued.**

#### **SECTION XV - Other Information : None**