Pony Testing International Group

Report No.：1004133-170

MSDS Report

Samples	Alkaline Zinc-Manganese Dry Battery (LR03)
Client Unit	Dong Guan Large Electronics Co., Ltd.
Client Address	Nancheng District, Baima Golden Road, Huafeng Building, The Third Floor No.5, Dongguan City.

Material Safety Data Sheet

Section 1 - Chemical Product and Company Identification

Product Name: Alkaline Zinc-Manganese Dry Battery (LR03)
Trade Name: Alkaline Battery
Sample Code: LR03
Manufacture: Dong Guan Large Electronics Co., Ltd.
Address: Nancheng District, Baima Golden Road, Huafeng Building, The Third Floor No.5, Dongguan City.
Post Code: 523070
Tel: 0769-22809803
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E-mail: huangjianhua@large-battery.com

Section 2 – Composition/Information on Ingredient

Chemical Name	Molecular Formula	CAS No.	Weight (%)
Zinc	Zn	7440-66-6	17~25
Manganese Dioxide	MnO_2	1313-13-9	35~43
Graphite	C	7782-42-5	3~4
Potassium hydroxide (liquid)	KOH	1310-58-3	9~12.5
Copper	Cu	7440-50-8	1
Iron	Fe	7439-89-6	15~18
Water	H_2O	7732-18-5	10~12
Nylon	---	24937-16-4	2~3

Section 3 - Hazards Identification

Reference as follow if contact Potassium hydroxide.

Eye

Causes severe eye burns. May cause irreversible eye injury. Contact may cause ulcerations of the conjunctiva and cornea. Eye damage may be delayed.

Skin

Causes skin burns. May cause deep, penetrating ulcers of the skin.

Inhalation

Irritation may lead to chemical pneumonitis and pulmonary edema. Causes severe irritation of upper respiratory tract with coughing, burns, breathing difficulty, and possible coma.

Ingestion

Harmful if swallowed.

Health Hazards (Acute and Chronic)

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.

Sign/Symptoms of Exposure

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

Section 4 - First Aid Measures

Eye

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

Skin

Get medical aid at once. Immediately remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Discard contaminated clothing in a manner which limits further exposure.

Inhalation

Get medical aid immediately. Remove from exposure and move to fresh air immediately. Use oxygen if available. Use oxygen device such as mask or bag.

Ingestion

Do not induce vomiting. Get medical aid immediately.

Note to Physician

May be toxic to the body. Wash out the solution with water promptly in an emergency. Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

Flash Point: N/A.
Auto-Ignition Temperature: N/A.
Extinguishing Media
Dry chemical, CO_2.
Special Fire-Fighting Procedures
Self-contained breathing apparatus.
Unusual Fire and Explosion Hazards
Cell may vent when subjected to excessive heat-exposing battery contents.
Hazardous Combustion Products
Carbon monoxide, carbon dioxide, and other metal oxide fumes.

Section 6 - Accidental Release Measures

Steps to be Taken in case Material is Released or Spilled
If the battery is accidentally broken and electrolyte 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 battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.
Waste Disposal Method
It is recommended to discharge the battery to the end, handing in the abandoned battery to related department unify, dispose of the batteries in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

Section 7 - Handling and Storage

Do not charge. 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. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

Other Precautions

Batteries may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. 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.

Ventilation

Not necessary under conditions of normal use.

Protective Gloves

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：Blue and golden with odorless columned solid.

Section 10 - Stability and Reactivity

Stability

Stable

Conditions to Avoid

Elevated temperatures fire and ignition sources, 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.

Section 12 - Ecological Information

When promptly used or disposed the battery does not present severe 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 battery in accordance with approved local, state, and federal requirements. Consult state environmental agency and/or federal EPA.

Section 14 - Transport Information

These batteries are exempt from dangerous goods. They are considered non-dangerous goods by the ICAO, IATA, DOT, and IMDG.

Separate alkaline batteries when shipping to prevent short-circuiting. They should be packed in strong packaging for support during transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles and wet by rain. The container must be handled carefully. Do not give shocks that result in a mark of hitting on a cell. Please refer to Section 7-HANDLING AND STORAGE also.

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

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》
《Occupational Safety and Health Act》(OSHA)
《Toxic Substances Control Act》(TSCA)
《Consumer Product Safety Act》(CPSA)
《Federal Environmental Pollution Control Act》(FEPCA)
《The Oil Pollution Act》(OPA)
《Superfund Amendments and Reauthorization Act Title III (302/311/312/313)》(SARA)
《Resource Conservation and Recovery Act》(RCRA)
《Safety Drinking Water Act》(CWA)
《California Proposition 65》
《Code of Federal Regulations》(CFR)

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 receiving it shall make his own determination of the suitability of the material for his particular purpose.

MSDS Creation Date: April 19, 2010