

Material Safety Data Sheet

File No.: EBO2212137-M352

Date of Issue: January 3, 2023

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1. Identification of Substance

Product Details

Product Name: ALKALINE BATTERY
Product Model: LR6, LR03, LR14, LR20, 6LR61
Product Use: Remote control, Smoke alarm, Wireless mouse, Electric toys and so on.
Manufacturer/Supplier By: Shenzhen Doublepow Energy Technology Co., Ltd.
Building 2#, Longquan Science Park, No.19, Dalang St., Longhua New District,
Shenzhen, Guangdong, P.R. China (518109)
Tel:+86-755-23441980
Emergency Tel:+86-755-23441980
E-mail:wtsos789@yeah.net

2. Hazards Identification

Hazard description: These batteries are no “substances” or “mixtures” according to Regulation (EC) No 1907/2006 EC. Instead they have to be regarded as “articles”, no substances are intended to be released during handling. Therefore there is no obligation to supply a “safety data sheet according to Regulation (EC) 1907/2006, Article 31”.

Routes of Entry: Not applicable under normal conditions.

Health Hazards: If battery leaking, exposure to caustic ingredients may occur. Therefore, may cause Sensitization by skin contract.

Hazards to Environment: Not applicable.

Fire and Explosion Hazards: Not applicable.

3. Composition/Data on Components

COMPONENT	CAS No.	% By wt.
Manganese dioxide	1313-13-9	38.88%
Graphite powder	7782-42-5	2.92%
Calcium stearate	1592-23-0	0.12%
Zinc powder	7440-66-6	15.28%
Zinc oxide	1314-13-2	0.312%
PA	107-10-8	0.081%
PAA	9003-01-4	0.081%
Potassium hydroxide(liquid)	1310-58-3	6.947%
Water	7732-18-5	8.878%
Other	/	26.501%

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4. First aid Measures

Eyes:	Rinse opened eye for several 15 minutes under running water. Then consult a doctor.
Skin:	Remove contaminated clothing and shoes. Immediately wash with water and soap and rinse thoroughly. Consult a doctor.
Inhalation:	Stop exposure if persistent discomfort occurs. In severe cases obtain medical attention.
Ingestion:	Rinse mouth with water and drink plenty of water. Consult a doctor.
Note to Physician:	May be toxic to the body. Wash out the solution with water promptly in an emergency. Treat symptomatically and supportively.

5. Fire Fighting Measures

Flash Point:	N/A.
Auto-Ignition Temperature:	N/A.
Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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.
Special Fire-Fighting Procedures:	As in any fire, firefighters should wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.

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.

7. Handling and Storage

Do not charge. The batteries should not be opened, destroyed or incinerate, since they may leak or rupture and

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release to the environment the ingredients that they contain in the hermetically sealed container.

Store in a dry, cool and well-ventilated area.

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.

8. Exposure Controls and 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.

If the battery leaks, must wear the following protection products.

	Respiratory protection	In all fire situations, use self-contained breathing apparatus.
	Hand protection	In the event of leakage wear gloves.
	Eye protection	Safety glasses are recommended during handling.
	Other	In the event of leakage, wear chemical apron.

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9. Physical and Chemical Properties

General Information

Form:	Solid
Color:	Mixed
Odor:	Odorless
Boiling Point:	No data available
Melting Point:	No data available
Vapor Pressure:	No data available
Vapor Density:	No data available
Solubility In Water:	No data available
Specific Gravity (H ₂ O = 1):	No data available
pH:	No data available
Freezing Point:	No data available
Molecular Weight:	Mixture, Not Applicable

10. Stability and Reactivity

Chemical Stability: This material is chemically stable under normal and storage and handling conditions.

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.

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.

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.

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.

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14. Transport Information

The batteries are considered to be “dry cell” batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA), the International Maritime Organization (IMO), the “Accord Européen Relatif au Transport International des Marchandises Dangereuses par Route” (ADR) and the “Règlement concernant le transport international ferroviaire de marchandises Dangereuses” (RID).

The requirements for shipping these batteries, in all modes of transportation, are that they be separated from each other to prevent short-circuits and to prevent movement that could lead to short-circuits. Products must also be packed in strong packaging that can withstand the rigors normal to transportation.

All 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 and ICAO Technical Instructions require the words “not restricted” and the IATA Dangerous Goods Regulations 2023 (64th Edition) Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

The packaging shall be adequate to avoid mechanical damage during transport, handling and stacking. The materials and pack design shall be chosen so as to prevent the development of unintentional electrical conduction, corrosion of the terminals and ingress of moisture.

Shock and vibration shall be kept to a minimum. For instance, boxes should not be thrown off trucks, slammed into position or piled so high as to overload battery containers below. Protection from inclement weather should be provided.

15. Regulations

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)

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《California Proposition 65》

《Code of Federal Regulations》 (CFR)

In accordance with all Federal, State and Local laws.

16. Other Information

DISCLAIMER OF LIABILITY

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable. Accordingly, EBO Testing Center will not be responsible for damages resulting from use of or reliance upon this information.

Prepared By EBO Testing Center.

Tel: 86-755-33126608

<http://www.MSDS51.com>

ebo@ebotest.com

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