

No.SET2016-00521

# MSDS Report

**Client unit:** SHENZHEN PKCELL BATTERY CO.,LTD

**Name of sample:** Alkaline Battery

**Address:** E2 Building, Guangming Technology Park, No.24  
Zhonghua Road, Longhua New Area, Shenzhen,  
China



Tested by: *Xie Lingling* Checked By: *Billow* Approved By: *Billow*

Date: Jan.12, 2016 Date: Jan.12, 2016 Date: Jan.12, 2016



# Material Safety Data Sheet

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## 1 Identification of substance

### Product details

**Product name:** Alkaline Battery

**Manufacturer:** SHENZHEN PKCELL BATTERY CO.,LTD

**Address:** E2 Building, Guangming Technology Park, No.24 Zhonghua Road, Longhua New Area, Shenzhen, China

**Producer:** SHENZHEN PKCELL BATTERY CO.,LTD

**Address:** E2 Building, Guangming Technology Park, No.24 Zhonghua Road, Longhua New Area, Shenzhen, China

**Model No.:** LR03/LR6/LR14/LR20/6LR61/4LR25/3LR12/LR61/LR1

**Tel:** 0755-86670642      **Emergency telephone:** 0755-86670643      **Fax:** 0755-86670609

**Mail:** info@pkcell.com

**MSDS Code:** SET2016-00521

## 2 Composition/Data on components

### Chemical characterization:

#### Description : (CAS#)

Chemical Name	In % By Weight	CAS No.	EC No.	Molecular Formula
Manganese Dioxide	41.8	1313-13-9	215-202-6	MnO <sub>2</sub>
Zinc	16	7440-66-6	231-175-3	Zn
Potassium Hydroxide	15	1310-58-3	215-181-3	KOH
Stainless Steel	16	12681-83-3	NA	NA
Water	7.2	7732-18-5	231-791-2	H <sub>2</sub> O
Graphite	3	7782-42-5	231-955-3	C
Others	1.0	NA	NA	NA

Abbreviation: CAS No. is Chemical Abstract Service Registry Number.

EC No. is European Inventory of Existing Commercial chemical Substances Number.

NA = Not apply.

## 3 Hazards identification

**Emergency Overview:** May explode in a fire, which could release hydrogen fluoride gas.

Use extinguishing media suitable for materials burning in fire.

**Primary routes of entry:** Skin contact, Eye contact, Inhalation, Ingestion

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## Symptoms of exposure:

Skin contact: Contact with damaged batteries may cause burns.

Eye contact: Contact with damaged batteries may cause burns. Eye damage is possible.

Inhalation: Inhalation of vapors or fumes released due to heat or a large number of leaking batteries may cause respiratory and eye irritation.

Ingestion: Swallowing is not anticipated due to battery size. Ingestion of battery contents may cause mouth, throat and intestinal burns and damage.

Reported as carcinogen: Not applicable.

## 4 First aid measures

### Inhalation

Not a health hazard.

### Eye contact

Not a health hazard.

### Skin contact

Not a health hazard.

### Ingestion

If swallowed, obtain medical attention immediately.

## IF EXPOSURE TO INTERNAL MATERIALS WITHIN CELL DUE TO DAMAGED OUTER CASING, THE FOLLOWING ACTIONS ARE RECOMMENDED;

### Inhalation

Leave area immediately and seek medical attention.

### Eye contact

Rinse eyes with water for 15min.

### Skin contact

Wash area thoroughly with soap and water and seek medical attention.

### Ingestion

Drink milk/water and induce vomiting; seek medical attention.

## 5 Fire fighting measures

### General Hazard:

Cell is not flammable. Combustion products include, but are not limited to Hydrogen fluoride, carbon monoxide and carbon dioxide.

### Extinguishing Media:

Use extinguishing media suitable for the materials that are burning.

### Special Fire fighting Instructions:

If possible, remove cell(s) from fire fighting area, If heated above 160°C, cell(s) may explode/vent.

### Fire fighting Equipment:

Use NIOSH/MSHA approved full-face self-contained breathing apparatus (SCBA) with full protective gear.



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## 6 Accidental release measures

### On land:

Place material into suitable containers and call local fire/police department.

### In water:

If possible, remove from water and call local fire/police department.

## 7 Handling and storage

**Handling:** Closed operation. To supply with sufficient partial air exhaust. The operating staff must have received special training and abide by the operating regulations. It is advised that the staff wear work clothes, respirator, chemical protective glasses and gloves. Keep away from fire and heating sources. No smoking in the workplace. Avoid contacting with oxidizers and acid. Do not expose the battery to excessive physical shock or vibration. Short-circuiting should be avoided. Place the cell beyond the child's reach. Take care when transport, prevent damaging the packing and container. Equip with relevant types and quantities of extinguishment instruments and device for divulgence handling. Empty the container which may include harmful material.

**Storage:** Store in a cool, dry place. Keep away from fire and heating sources. Don't keep the samples with oxidizer and acid. Equip with relevant types and quantities of the extinguishment instruments. The storage place should be equipped with suitable shelter materials for divulgence handling.

## 8 Exposure controls and personal protection

**Engineering controls:** Keep away from heat and open flame. Store in a cool dry place.

### Personal Protection:

Respirator: Not required during normal operations. SCBA required in the event of a fire.

Eye/face protection: Not required safety practices of employer.

Gloves: Not required for handling of cells.

Foot protection: Steel toed shoes recommended for large container handling.

## 9 Physical and chemical properties:

### General Information

**State:** Colored cylinder solid

**Color:** Black

### Chemical properties:

**Melting Point:** >300°C

**Vapor Pressure:** Not Applicable

**Vapor Density:** Not Applicable

**Solubility In Water:** Insoluble

**Specific Gravity (H<sub>2</sub>O = 1):** Not Applicable

**pH:** 7-8

**Density:** Not Applicable

**Nominal Voltage( Cell/Battery/Power Bank):** 1.5V

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## 10 Stability and reactivity

**Reactivity:** None.

**Incompatibilities:** None during normal operation. Avoid exposure to heat, open flame, and corrosives.

**Hazardous Decomposition Products:** None during normal operating conditions. If cells are opened, hydrogen fluoride and carbon monoxide may be released.

**Conditions to Avoid:** Avoid exposure to heat and open flame. Do not puncture, crush or incinerate.

## 11 Toxicological information

**This product does not elicit toxicological properties during routine handling and use**

**Sensitization:** The liquid in the battery may cause sensitization to some person.

**Teratogenicity:** No information is available.

**Reproductive toxicity:** No information is available.

**Acute toxicity:** No information is available.

**If the cells are opened through misuse or damage, discard immediately. Internal components of cell are irritants and sensitizers.**

## 12 Ecological information

Some materials within the cell are bio-accumulative. Under normal conditions, These materials are contained and pose no risk to persons or the surrounding environment.

## 13 Disposal considerations

California regulated debris

RCRA Waste Code: Non-regulated

Dispose of according to all federal, state, and local regulations.

## 14 Transport information

In general, all batteries in all forms of transportation (by sea, land or air) 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 outer packaging" that prevents spillage of contents. All original packaging for energizer alkaline batteries has been designed to be compliant with these regulatory concerns.

Alkaline batteries (sometimes referred to as "dry cell" batteries) are not listed as dangerous goods under the IATA Dangers Good Regulations, 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 requirements contained in the following special provisions. Special Provision A123 in the IATA Dangers Good Regulations and ICAO Technical Instructions and Special Provision 130 in 49 CFR 172.102 of the U.S. hazardous materials regulations require alkaline batteries are packed in such a way to prevent

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short circuits or generating a dangerous quantity of heat. In addition, the IATA Dangers Good Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision A123 be provided on the air waybill, when an air waybill is issued.

IMDG Special Provision 304: “This entry may only be used for the transport of non-activated batteries which contain dry potassium hydroxide and which are intended to be activated prior to use by the addition of an appropriate amount of water to the individual cells.”

## 15 Regulations

OSHA Hazard communication standard (29 CFR 1910.1200)

Hazardous \_\_\_ Non-hazardous

ISO 11014-2009 Safety data sheet for chemical products - Content and order of sections.

The International Air Transport Association (IATA) Dangerous Goods Regulations, 57<sup>th</sup>, 2016.

## 16 Other information:

The above information are correct, but does not contain all of the information and only used as a guide. The information in this document is based on our current knowledge, it apply to this product as for the correct safety tips. The information does not guarantee the properties of this product. Our company is not responsible for any damages caused by the products.

Note:

-The model for test is LR03.

-Sample photo:

