Material Safety Data Sheet

MSDS Code: EBO1703040-M162 Date of Issue: March 09, 2017

ALKALINE BATTERY

1. Identification Of Substance

Product Details

Product Name: ALKALINE BATTERY

Manufacturer/Supplier By: SHUYANG XINNENG BATTERY CO., LTD.

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2. Composition/Data On Components

COMPONENT	CAS #	% by wt.
Manganese Dioxide	1313-13-9	20.7%
Zinc	7440-66-6	8.1%
Graphite	7782-425	2.5%
Potassium Hydroxide	1310-58-3	2.4%
Cadmium	7440-43-9	<0.002%
Mercury	7439-97-6	<2%
Lead	7439-92-1	<0.004%
Iron	7439-89-6	<64.3%

3. Hazards Identification

Legal remark (EU): 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”.

GHS classification: N/A

Signal Word: N/A

Hazard Classification: N/A

Under normal conditions of use, 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.

Inhalation:	Contents of an open battery can cause respiratory irritation.
Skin Contact:	Contents of an open battery can cause skin irritation and/or chemical burns.
Eye Contact:	Contents of an open battery can cause severe irritation and chemical burns.

4. First aid Measures

Eyes:	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.

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.

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.

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7. Handling And Storage

Guideline for safe handling:	Always follow the warning information on the batteries and in the manuals of devices. Only use the recommended battery types. Keep batteries away from children. For devices to be used by children, the battery casing should be protected against unauthorized access. Unpacked batteries shall not lie about in bulk. In case of battery change always replace all batteries by new ones of identical type and brand. Do not swallow batteries. Do not throw batteries into water. Do not throw batteries into fire. Do not short-circuit batteries. Do not recharge primary batteries. Do not open or disassemble batteries
Storage:	Storage preferably at room temperature (approx. 20°C). Avoid large temperature changes. Avoid direct sunlight. At higher temperature the electrical performance may be reduced. Storage of unpacked batteries can cause short circuit and heat generation.

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.
Personal Protection is recommended for venting batteries:	Respiratory protection, protective gloves, protective clothing and safety glass with side shields.

9. Physical And Chemical Properties

General Information

Nominal Voltage:	1.5V

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Capacity:	1200mAH
Watt-hour:	1.8Wh

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.

14. Transport Information

In general, all batteries in all forms of transportation (ground, air, or ocean) 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 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 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 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.

Regulatory Body	Special Provisions
ADR	Not regulated
IMDG	Not regulated
UN	Not regulated
US DOT	49 CFR 172.102 Provision 130
IATA 58th Edition	A123
ICAO	Not regulated

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 58th Edition Dangerous Goods Regulations and ICAO Technical Instructions require the words “not restricted” and the Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

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)
《California Proposition 65》
《Code of Federal Regulations》(CFR)
In accordance with all Federal, State and Local laws.

16. Other 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.