

MSDS

MATERIAL SAFETY DATA SHEET

Client : GUANGZHOU SSUO ELECTRONICS CO.,LTD.
No.85 TAO TANG ZHUANG,GAOXI VILLAGE,HUADONG TOWN,HUADU
DISTRCT ,GUANGZHOU

Prepared by : **Shenzhen XINHE Testing Technology Co., Ltd.**
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*****FOR FURTHER DETAILS, PLEASE REFER TO THE FOLLOWING PAGE(S)*****

Shenzhen XINHE Testing Technology Co., Ltd.

Drafted By: Kevin Liu

Review By: Jackie Chen

Approved By: Peter Yuan



1. CHEMICAL PRODUCT INFORMATION

Product details:

Product name : Alkaline zinc-manganese button cell
AG13(LR44,357A,LR1154),AG0(LR521,SR521SW,LR63,379),
AG1(LR621,SR621SW,364A, LR60),AG2(LR726,LR59, 396),
AG3(LR41,LR736,392),AG4(LR626,SR626SW,377A,LR66),
Model : AG5(LR754,,LR48393),AG6(LR920,SR920SW,LR69,171,371),
AG7(SR927SW,LR927,LR57,395),AG8(LR1120,,LR55,391),
AG9(LR936,394,LR45),AG10(LR1130,389,LR54),AG11(LR72,361,LR58),
AG12(LR1142,386,LR43),23A(8LR932),27A(8LR732,8LR632,VA-22,EL-12,EL-812),
4LR44, 625A
Mark : SSUO
TEL : 13533519288
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Supplier/Manufacturer

Applicant : GUANGZHOU SSUO ELECTRONICS CO.,LTD.
Address : No.85 TAO TANG ZHUANG,GAOXI VILLAGE,HUADONG TOWN,HUADU
DISTRCT ,GUANGZHOU

Summary:

As specified by the client, This safety data sheet was prepared in accordance with Un GHS Rev.7, The EU CLP REGULATION(EC) No 1272/2013, and US OSH Hazard Communication Standards(29 CFR 1910.1200). Please refer to attached report for details.

2. HAZARDS IDENTIFICATION

The important hazards and adverse effects of the chemical product	No information available
Chemical product specific hazards	No information available
Outline of an anticipated emergency	<p>Chemical contents are sealed in metal can. But if battery is mechanically or electrically abused or placed on high temperature condition, risk of leakage, heat generation or in extreme case explosion may be anticipated.</p> <p>Most likely risk is attaching of released caustic alkali (KOH) to skin and eye. Anticipated volume of leakage is very little. For consumer use, warning to abuse is indicated on package.</p>

3. COMPOSITION /HAZARDOUS INGREDIENTS

Chemical Name	CAS No.	EC#	Contents
Manganese dioxide	1313-13-9	215-202-6	51.70%
Potassium hydroxide Solution	1310-58-3	215-181-3	18.65%
Graphite	7782-42-5	231-955-3	7.14%
Zinc Powder	7440-66-6	231-175-3	22.39%
OTHERS	----	----	0.12%

4. FIRST AID MEASURES

Inhalation	If ingredient leaked out from inside of a battery and if inhaled it, move to a place where fresh air is provided. Refer for medical attention.
Skin contact	If ingredient leaked out from inside of a battery and stuck on skin, wash the contact areas off immediately with plenty of water and soap. If
Eyes contact	If ingredient leaked out from inside of a battery and came into eyes, flush the eyes with plenty of water for at least 15 minutes immediately
Swallowing	In case of swallowing of battery, immediately refer for medical attention.

5. FIGHTING MEASURES

Fire extinguishing agent:

Dry chemical, alcohol-resistant foam, powder, atomized water, carbon dioxide and dry sand are effective. Extinguishing method:

Escape batteries to safe place prevent from ignition by spreading fire.

Because packaging material of battery is paper, use water extinguisher, CO₂ extinguisher or powder extinguisher as normal extinguisher.

Since vapor, generated from burning batteries may make eyes, nose and throat irritate, be sure to extinguish the fire on the windward side. Wear the respiratory protection equipment in some cases.

6. ACCIDENTAL RELEASE MEASURES

Chemical contents are sealed in metal can. But if the battery is mechanically or electrically abused, contents may leak out. In such case, take action as showing below.

Personal precautions: Temporary inhalation of odor and attaching of electrolyte to skin does not cause serious health hazard. Be sure the ventilation and washing out of electrolyte quickly.

Environmental precautions: Clean up it quickly. Specific environmental precaution is not necessary. Method and materials for containment and methods and materials for cleaning up: Contain and collect spillage and place in container for disposal according to local regulations.

7. HANDING AND STORAGE

Handling	Do not short-circuit, disassemble, deform, heat or incinerate. Do not pile up or mingle batteries with each other. Do not place battery on metal case, metal plate or antistatic material. In case of multi cell application, replace all batteries to new at once when replacing used batteries.
Storage	Be sure to store batteries in well-ventilated, dry and cool conditions. Keep away from water, rain, snow, frost or dew condensation. Do not store batteries near source of heat or nozzle of hot air. Do not store batteries in direct sunshine. Take care not to get wet packing by dew condensation when packing is removed from cold to warm and humid condition. Enough number of fire fighting apparatuses should be installed in warehouse. Keep batteries out of reach of children.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

There is no need of personal protective equipment on regular handling and storage. In the event, however, a large amount of electrolyte should be released by mechanical or electrical abuse, use the protections as shown below.

Respiratory protection : Mask (with a filter preferably)
Hand protection : Synthetic rubber gloves
Eye protection : Goggles or glasses

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solids
Color :	silvery
Nominal Voltage:	1.5V
Nominal Power	150mAh
Form:	Button
Boiling point :	Not available.
Rechargeable:	No

10. STABILITY AND REACTIVITY

Stability:	Stable on regular handling
Conditions to avoid:	External short circuit of battery, deformation by crush, exposure at high temperature of more than 85 degree C (may cause leakage and rupture), direct sunlight, high humidity
Materials to avoid:	Water, a chain, and a piece of metal that causes short circuit. Hazardous decomposition product: Emitted acid or poisonous gases in fire

11 - TOXICOLOGICAL INFORMATION

Acute Toxicity:

CAS NO.	LC50/LD50
1313-13-9	No data available
1310-58-3	LD50 Rat (oral): 284mg/kg
7439-89-6	No data available
7440-66-6	LD50 Rat (oral): >2000mg/kg
7732-18-5	No data available
7440-44-0	No data available

Skin irritation/corrosion:

Eye danger/irritation: No data available.

Respiratory or Skin sensitisation: No data available.

Reproductive Cell Mutagenicity: No data available.

Carcinogenicity: No data available.

Reproductive Toxicity: No data available.

Specific target organ toxicity-Single exposure: No data available.

Specific target organ toxicity-Repeated exposure: No data available.

Aspiration hazard: No data available.

Potential Health Effects: No data available.
Inhalation: No data available.
Skin contact: No data available.
Eye contact: No data available.
Ingestion: No data available.

12 - ECOLOGICAL INFORMATION

Persistence and degradability	No information available
Mobility in soil	No information available

13- DISPOSAL CONSIDERATIONS

Dispose of batteries in accordance with applicable federal, state and local regulations.
For safety precaution, battery should be insulated in proper manner; covering both terminals by tape, wrapping of battery in insulative bag or packing battery in original package is recommended in order to prevent ignition or explosion due to short-circuit.

14. TRANSPORT INFORMATION

Alkaline 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) and International Maritime Dangerous Goods Regulations (IMDG).

The only DOT requirement for shipping these batteries is special provision 130 which states:

"Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals).

The only requirements for shipping these batteries by ICAO and IATA is Special Provision A123 which states: "An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transportation."

As of 1/1/97 IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting.

The goods can be shipped by air in accordance with International Civil Aviation Organization (ICAO), International Air Transport Association (IATA), DGR Packing Instructions (PI) 952 appropriate of IATA DGR 65th (2024 Edition) for transportation.

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.

16- REGULATORY 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.

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