

# MATERIAL SAFETY DATA SHEET



## 1: Identification

### 1.1 GHS Product Identifier

**Product Name:** ALKALINE BUTTON BATTERIES

### 1.2 Other Means of Identification

**Product Code(s):** LR1130, LR54, AG10

### 1.3 Supplier's Details

**Distributor Address**

Shenzhen High Energy Sunbeam Battery Co., Ltd  
No.4 Silver Tin Road  
XiXiang Street Baoan District  
Phone: 0755-29660078

### 1.4 Emergency Telephone Number

CHEM TEL: 800-255-3924

## 2: Hazards Identification

### 2.1 Classification

N.A.

## 3: Composition/Information on Ingredients

Chemical Name	CAS #	EINECS #	Approx. % of Total Weight
Manganese Dioxide	1313-13-9	215-202-6	~26 Wt%
Zinc Power	7440-66-6	231-175-3	~11 Wt%
Iron Shell	7439-89-6	231-096-4	~30 Wt%
Potassium Hydroxide	1310-58-3	215-181-3	~3.6 Wt%
Carbon	7440-44-0	231-153-3	~2.5 Wt%
Rubber Ring, Membrane, Graphite	-/-/7782-42-5	-/-/231-955-3	~8 Wt%

## 4: First Aid Measures

### 4.1 First Aid Procedures

- Skin Contact:** If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.
- Eye Contact:** If electrolyte comes in contact with eyes, wash with copious amounts of water for fifteen (15) minutes and contact a physician.
- Inhalation:** If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area.

## 5: Fire-Fighting Measures

### 5.1 Flash Point Method Used

N.A.

### 5.2 Ignition Temperature

N.A.

### 5.3 Flammable Limits

N.A.

LEL: N.A.

UEL: N.A.

### 5.4 Extinguishing Media

Carbon Dioxide, Dry Chemical or Foam extinguishers

### 5.5 Special Fire Fighting Procedures

N.A.

### 5.6 Unusual Fire and Explosion Hazards

Do not dispose of battery in fire - may explode.

Do not short-circuit battery - may cause burns.

## 6: Accidental Release Measures

### 6.1 Personal Precaution and Protective Equipment

Batteries that are leaking should be handled with rubber gloves. Avoid direct contact with electrolyte. Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).

## 7: Handling and Storage

### 7.1 Safe Handling and Storage Advice

- Batteries should be handled and stored carefully to avoid short circuits.
- Do not store in disorderly fashion or allow metal objects to be mixed with stored batteries.
- Never disassemble a battery.
- Do not breathe cell vapors or touch internal material with bare hands.
- The cells and batteries shall not be stored in high temperature. The maximum temperature allowed is 60°C for a short period during the shipment. Otherwise the cells may cause leakage and can result in shortened service life.

## 8: Exposure Controls/Personal Protection

### 8.1 Occupational Exposure Limits

LTEP: N.A.

STEP: N.A.

### 8.2 Individual Protection Measures (Such as Personal Protective Equipment)

**Respiratory Protection:** N.A

**Ventilation Local Exhausts:** N.A

**Special:** N.A

**Mechanical (General):** N.A

**Other:** N.A

**Protective Gloves:** N.A

**Eye Protection:** N.A

**Other:** N.A

**Work/Hygienic Practices:** N.A

## 9: Physical/Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

<b>Boiling Point:</b>	N.A.
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	N.A.
<b>Vapor Pressure (mm Hg):</b>	N.A.
<b>Melting Point:</b>	N.A.
<b>Vapor Density (AIR = 1):</b>	N.A.
<b>Evaporation Rate (Butyl Acetate):</b>	N.A.
<b>Solubility in Water:</b>	N.A.
<b>Appearance and Odor:</b>	Button Shape, Odorless

## 10: Stability and Reactivity

### 10.1 Chemical Stability

Stable under recommended storage conditions.

### 10.2 Incompatible Materials

N.A.

### 10.3 Hazardous Decomposition or Byproducts

Hazardous polymerization may occur.

### 10.4 Conditions to Avoid

N.A.

## 11: Toxicological Information

### 11.1 Information on Likely Routes of Exposure

**Inhalation:** N.A.

**Ingestion:** N.A.

### 11.2 Health Hazard (Acute and Chronic)

In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte. Contact with electrolyte can cause severe irritation and chemical burns. Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.

## 12: Ecological Information

N.A.

## 13: Disposal Considerations

Dispose of batteries according to government regulations.

## 14: Transportation Information

### 14.1 General 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 button 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 61th Edition, 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:

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<b>Regulatory Body:</b>	Special Provisions
<b>ADR:</b>	Not Regulated
<b>IMDG:</b>	Not Regulated
<b>UN:</b>	Not Regulated
<b>US DOT:</b>	49 CFR 172.102 Provision 130
<b>IATA:</b>	A123
<b>ICAO:</b>	Not Regulated

All GAONENGMAX Alkaline button 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 Special Provision number A123 be provided on the air waybill, when an air waybill is issued.

## 15: Regulatory Information

Special requirements according to the local regulatories.

## 16: Other Information

The data in this Material Safety Data Sheet relates only to the specific material designated herein.

## 17: Measures for Fire Extinction

In case of fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cool exterior of batteries if exposed to fire to prevent rupture.

Fire fighters should wear self-contained breathing apparatus.