

# GP Batteries

## Material Safety Data Sheet for GP Cylindrical Alkaline Battery

Document Number: MAA100

Revision:30

Page 1 of 5

IDENTITY (As Used on Label and List) Alkaline batteries 13A(LR20)/14A(LR14)/15A(LR6)/ 24A(LR03)/910A(LR1)/25A(LR8D425)	Note: Blank spaces are not permitted if any item is not applicable or no information is available, the space must be marked to indicate that.
---	---

### Section 1- Identification

Manufacturer's Name  GPI International Ltd. Zhongyin (Ningbo) Battery Co., Ltd.	Telephone Number for information  852-2484-3111
Address (Number, Street, City State, and ZIP Code) 7/F, Building 16W, 16 Science Park West Avenue, Hong Kong Science Park, New Territories. H.K.	Date of prepared and revision 01 Jan, 2023
	Signature of Prepare (optional)

### Section 2 – Hazards Identification

This contains potassium hydroxide solution (KOH), and other combustible materials, all sealed in steel can. For this reason, improper handling of the battery could lead to distortion, leakage\*, overheating, explosion and cause human injury or equipment trouble. Please strictly observe safety instructions. (\*leakage is defined as an unintended escape of liquid from a battery.)

### Section 3 – Composition/Information on Ingredients

Ingredient	CAS#	EINECS No.	Approximate Content (wt%)					
			15A (LR6)	24A (LR03)	14A (LR14)	13A (LR20)	910A (LR1)	25A (LR8D425)
Manganese Dioxide (MnO <sub>2</sub> )	1313-13-9	215-202-6	42.6	40.9	40.6	41.8	34.2	36.0
Zinc (Zn)	7440-66-6	231-175-3	16.1	14.8	16.0	17.4	13.5	17.0
Water (H <sub>2</sub> O)	7732-18-5	231-791-2	12.2	11.7	11.0	11.1	9.5	6.5
Potassium Hydroxide (KOH)	1310-58-3	215-181-3	5.2	4.8	7.0	7.0	4.2	1.3
Graphite	7782-42-5	231-955-3	3.0	1.7	3.2	3.4	3.0	2.3
Brass	12597-71-6	603-111-8	2.4	3.0	1.2	0.8	2.3	3.5
Steel	7439-89-6	231-096-4	15.7	20.4	18.6	16.3	29.5	30.0
Ni-plating	7440-02-0	231-111-4	0.3	0.3	0.2	0.2	0.3	0.6
Nylon-66	32131-17-2	608-706-6	1.6	1.5	1.6	1.4	2.9	2.2
Fiber	None	None	0.9	0.9	0.6	0.6	0.6	0.6

# GP Batteries

## Material Safety Data Sheet for GP Cylindrical Alkaline Battery

Document Number: MAA100

Revision:30

Page 2 of 5

### Section 4 – First Aid Measures

None unless internal materials exposure. If contents are leaked out, observe following instructions:

**Inhalation** Fumes can cause respiratory irritation. Remove to fresh air and consult a physician.

**Skin** Immediately flush skin with plenty of water. If itch or irritation by chemical burn persists, consult a physician.

**Eyes** Immediately flush eye with plenty of water for at least 15 minutes. Consult a physician immediately

**Ingestion** If swallowing a battery, consult a physician immediately.

If contents come into mouth, immediately rinse by plenty of water and consult a physician.

### Section 5 – Fire-Fighting Measures

Flash Point (Method Used)	Ignition Temp.	Flammable Limits	LEL	UEL
N.A.	N.A.	N.A.	N.A.	N.A.

**Extinguishing Media**

Carbon Dioxide, Dry Chemical or Foam extinguishers

**Special Fire Fighting Procedures**

N.A.

**Unusual Fire and Explosion Hazards**

Do not dispose of battery in fire - may explode.

Do not short-circuit battery - may cause burns.

### Section 6 – Accidental Release Measures

**Steps to Be Taken in Case Material is Released or Spilled**

Batteries that are leakage should be handled with rubber gloves.

Avoid direct contact with electrolyte.

Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA).

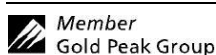
### Section 7 – Handling and Storage

**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.



Manufacturer reserves the right to alter or amend the design, model and specification without prior notice.

# GP Batteries

## Material Safety Data Sheet for GP Cylindrical Alkaline Battery

Document Number: MAA100

Revision:30

Page 3 of 5

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 maybe leakage and can result in shortened service life.

### Section 8– Exposure Controls / Person Protection

Occupational Exposure Limits: LTEP	STEP	
N.A.	N.A.	
Respiratory Protection (Specify Type)		
N.A.		
Ventilation	Local Exhausts	Special
	N.A.	N.A.
	Mechanical (General)	Other
	N.A.	N.A.
Protective Gloves	Eye Protection	
N.A.	N.A.	
Other Protective Clothing or Equipment		
N.A.		
Work / Hygienic Practices		
N.A.		

### Section 9 - Physical / Chemical Properties

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

# GP Batteries

## Material Safety Data Sheet for GP Cylindrical Alkaline Battery

Document Number: MAA100

Revision:30

Page 4 of 5

### Section 10 – Stability and Reactivity

Stability	Unstable		Conditions to Avoid
	Stable	X	

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	

### Section 11 – Toxicological Information

Route(s) of Entry	Inhalation?	Skin?	Ingestion?
	N.A.	N.A.	N.A.

Health Hazard (Acute and Chronic) / Toxicological information

In case of electrolyte leakage, skin will be itchy when contaminated with electrolyte.

In contact with electrolyte can cause severe irritation and chemical burns.

Inhalation of electrolyte vapors may cause irritation of the upper respiratory tract and lungs.

### Section 12 – Ecological Information

N.A.

### Section 13 – Disposal Considerations

Dispose of batteries according to government regulations.

# GP Batteries

## Material Safety Data Sheet for GP Cylindrical Alkaline Battery

Document Number: MAA100

Revision:30

Page 5 of 5

### Section 14 – Transportation 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 GP 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 64<sup>th</sup> 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.

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

All GP alkaline batteries are packed in such a way to prevent short circuits or the generation of dangerous quantities of heat and meet the special provisions listed above. In addition, the 2023 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.

### Section 15 – Regulatory Information

Special requirements according to local regulations.

### Section 16 – Other Information

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

### Section 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.