GP Batteries

Material Safety Data Sheet for GP Cylindrical Alkaline Battery

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. NingboGP & Sonluk 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, 2025
	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_2)	1313-13-9	215-202-6	42.6	42.0	41.0	41.8	34.2	36.0
Zinc (Zn)	7440-66-6	231-175-3	18.1	16.9	17.8	17.4	13.5	17.0
Water (H_2O)	7732-18-5	231-791-2	8.3	7.2	11.5	10.9	9.5	6.5
Potassium Hydroxide (KOH)	1310-58-3	215-181-3	6.3	4.8	8.0	7.0	4.2	1.3
Graphite	7782-42-5	231-955-3	3.0	2.5	2.8	3.4	3.0	2.3
Brass	12597-71-6	603-111-8	2.4	3.5	0.8	0.8	2.3	3.5
Steel	7439-89-6	231-096-4	17.5	21.2	15.7	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	32131-17-2	608-706-6	0.9	0.9	1.4	1.4	2.9	2.2
Cellulose microcrystalline	9004-34-6	232-674-9	0.6	0.7	0.8	0.8	0.6	0.6

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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

1) Handling

Never swallow. Never charge. Never heat. Never expose to open flame. Never disassemble.

Never reverse the positive and negative terminals when mounting.

Never short-circuit the battery. Never weld the terminal or wire to the body of the battery directly.

Never use different batteries together. Never touch the liquid leaked out of battery.

Never bring fire close to battery liquid. Never keep in touch with battery.

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2) Storage

Never store the battery in hot and high humid place.

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	Specific Gravity (H_2O=1)
N.A.	N.A.
Vapor Pressure (mm Hg)	Melting Point
N.A.	N.A.
Vapor Density (AIR=1)	Evaporation Rate (Butyl Acetate)
N.A.	N.A.

Solubility in Water

N.A.

Appearance and Odor

Cylindrical Shape, odorless

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. Please follow the instructions of proper regulation. As electric capacity is left in a discarded battery and it comes into contact with other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.

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, 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 2025 IATA (66th 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.

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.

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