Safety Data Sheet

This sheet is only provided as technical information and is referred normal use of the product in question. It makes no warranty expressed or implied.

Section 1- Identification

● Product Name Alkaline zinc-manganese dioxide batteries	Sizes LR6/LR03/LR20/LR14
● Company: NingboGP & Sonluk Battery Co.,Ltd.	Telephone Numbers: 86-574-87990719
● Address: No.600 Qingfeng Road, Cicheng Town, Jiangbei District, Ningbo, Zhejiang, China	Date of preparation Jan.24,2025

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.)

Results of PBT and vPvB assessment:

PBT：NA

vPvB：NA

Determination of endocrine-disrupting properties:NA

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Section 3-Composition/Information on Ingredients

Ingredient	CAS#	ApproximateContent(wt%)			
		LR6	LR03	LR14	LR20
Manganese Dioxide (MnO_2)	1313-13-9	42.6	42.0	41.0	41.8
Zinc (Zn)	7440-66-6	18.1	16.9	17.8	17.4
Water (H_2O)	7732-18-5	8.3	7.2	11.5	10.9
Potassium Hydroxide (KOH)	1310-58-3	6.3	4.8	8	7.0
Graphite	7782-42-5	3	2.5	2.8	3.4
Brass	12597-71-6	2.4	3.5	0.8	0.8
Steel	7439-89-6	17.5	21.2	15.7	16.3
Ni-plating	7440-02-0	0.3	0.3	0.2	0.2
Nylon	32131-17-2	0.9	0.9	1.4	1.4
Cellulose microcrystalline	9004-34-6	0.6	0.7	0.8	0.8

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

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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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.

2) Storage

Never store the battery in hot and high humid place.

Section 8-Exposure Controls/Personal Protection

No engineering measure is necessary during normal use. If internal cell materials are leaked, the information in Section 4 & Section 6 will be useful.

Section 9-Physical and Chemical Characteristics

Nominal Voltage: 1.5V

Section 10-Stability and Reactivity

Stability	Stable
Hazardous polymerization	Will not occur
Condition to avoid	See section 7.
Hazardous Decomposition or Byproducts	Hydrogen

Section 11-Toxicological Information

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/irritation: Causes serious eye damage.

Respiratory or skin sensitisation: Based on available data, the classification criteria are

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not met.
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
STOT-repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.
Endocrine disrupting properties： None of the ingredients is listed.

Section 12-Ecological Information

Aquatic toxicity: No further relevant information available
Persistence and degradability: No further relevant information available.
Bioaccumulative potential: No further relevant information available..
Mobility in soil: No further relevant information available.
Results of PBT and vPvB assessment:
PBT: NA
vPvB: NA
Endocrine disrupting properties: The product does not contain substances with endocrine disrupting properties.

Section 13-Disposal Considerations

The battery may be regulated by national or local regulation. 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 alkaline batteries has been designed to be compliant with these regulatory concerns.

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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 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 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

USA EPA Mercury Containing & Rechargeable Battery Management Act of 1996: No mercury added

REGULATION (EU) 2023/1542 Batteries and Waste Batteries: batteries are compliant with all aspects of the Directive

Section 16-Other Information

If you want further information, please contact sales representative.

Prepared by: 冯晓波 Checked by:

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