

MATERIAL SAFETY DATA SHEET

Shenzhen JKN Battery CO., LTD.

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1. IDENTIFICATION

PRODUCT NAME: Alkaline Batteries-"No Mercury" Formula

SIZE: LR6, LR03,LR20,LR14

EMERGENCY TELEPHONE NUMBER:86-755-27798579

ENVIRONMENTAL HEALTH&SAFE INFORMATION: 86-755-27797247

2. INGREDIENTS

INGREDIENT NAME	CAS#	%	TLV*
Manganese Dioxide	1313-13-9	32-38	C5.0mg/m ³ (TWA)
Steel	7439-89-6	19-23	---
Zinc	7440-66-6	11-16	5.0mg/m ³ (ZnO,Fume,TWA)
Potassium Hydroxide	1310-58-3	5-9	Not Listed
Graphite	7782-42-5	3-5	15mppcf
Barium Sulfate	7727-43-7	<5	15mg/m ³ (TWA)
Water, paper, plastic, other	---	Balance	---

3. PHYSICAL DATA

Boiling Point @ 760 mm Hg (°C):	NA
Vapor Pressure (mm Hg @ 25°C):	NA
Vapor Density (Air = 1):	NA
Density (grams/cc):	NA
Percent Volatile by Volume (%):	NA
Evaporation Rate (Butyl Acetate=1):	NA
Physical State:	NA
Solubility in Water (% by Weight):	NA
PH:	NA
Appearance and Odor:	Geometric solid object

NA=Not Applicable

Alkaline Battery Page 1 of 3

4. FIRE & EXPLOSION HAZARD DATA

FLASH POINT: NA LOWER (LEL): NA

FLAMMABLE LIMITS IN AIR (%): NA UPPER (UEL): NA

EXTINGUISHING MEDIA: Use water, foam or dry powder, as appropriate

AUTO-IGNITION: NA

SPECIAL FIRE FIGHTING PROCEDURES: As with any fire, wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products (See section 2) .

SPECIAL FOR EXPLOSION HAZARDS: Like any sealed container, battery cells may rupture when exposed to excessive heat, this could result in the release of flammable or corrosive materials.

5. HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE (TLV) AND SOURCE: NA

EFFECTS OF OVEREXPOSURE: None (In fire or rupture situation see 2 and section 4)

EMERGENCY FIRST AID PROCEDURES:

Skin and Eyes:

In the event that battery ruptures, flush exposed skin with copious quantities of flowing lukewarm water for a minimum of 15 minutes. Get immediate medical attention for eyes. Wash skin with soap and water.

Swallowing:

Ingestion of a battery can be harmful Call 86-755-27797247

For advice and follow up.

6. REACTIVITY DATA

STABLE OR UNSTABLE: Stable

INCOMPATIBILITY (MATERIALS TO AVOID): NA

HAZARDOUS DECOMPOSITION PRODUCTS: NA

DECOMPOSITION TEMPERATURE (°F): NA

HAZARDOUS POLYMERIZATION: Will not Occur

CONDITIONS TO AVOID: Avoid electrical shorting

7. SPIL OR LEAK PRODEDURES

PROCEDURES TO CONTAIN AND CLEAN UP LEAKS OR SPILLS: In the event of a battery rupture, prevent skin contact and collect all released material in a plastic lined metal container .

REPORTING PROCEDURE: Report all spills in accordance with international and local reporting requirements .

8. PROTECTION INFORMATION

RESPIRATORY PROTECTION (SPECIFY TYPE): NA

VENTILATION:	Local Exhaust:	NA
	Mechanical (General):	NA
	Special:	NA
	Other:	NA

PROTECTIVE GLOVES: NA

EYE PROTECTION: NA

OTHER PROTECTIVE CLOTHING: NA

9. SPECIAL PRECAUTIONS

HANDING AND STORAGE: Store in a dry place. Storing unpackaged cell together could result in cell shorting and heat build-up .

10. SARA 313

Notification is not required because these products are articles that do not release a covered toxic chemical under the normal conditions of processing or use .

11. TRANSPORTATION-SHIPPING

These are “batteries, dry” and not considered to be a “hazardons material ” per the Dept. of (USDOT)

Transportation regulations of “dangerous goods” per the international Air Transport Association (IATA) regulations.