新 利 達 電 池 實 業 有 限 公 司

NEW LEADER BATTERY INDUSTRY LTD.

Material Safety Data Sheet for (0.%Hg) Alkaline Button Cell (LR) Series

Document Number: MSDS-LR (0.%Hg) Series (Version : 2011)

IDENTITY (As used on Label and List)

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 I – Manufacturer Information

Manufacturer's Name : New Leader Battery Industry Limited

Emergency & Information Phone No: 852 - 2790 6280

Address : Rm A, 4/F, Block 1, Camelpaint Building, 62 Hoi Yuen Road, Kwun Tong, Kowloon, Hong Kong.

Signature of Prepare (Optional)

SECTION II – Hazardous Ingredients / Identity Information

IMPORTANT NOTE : The battery should be hermetically sealed under normal conditions. The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

Substance Name	***Chemical Identification CAS#***	***% Weight***
Zinc	7440 - 66 – 6	8%
Graphite	7782 - 42 – 5	3%
Manganese Dioxide	1313 - 13 - 9	30%
Potassium Hydroxide	1310 - 58 – 3	10%
Iron	7439 - 89 – 6	37%
Distilled Water	7732 – 18 - 5	11%
Others	N/A	Balance

SECTION III – Physical / Chemical Characteristics

Boiling Point : N.A.

Specific Gravity (H2O = 1) : N.A.

Melting Point : N.A.

Vapor Pressure (mm Hg) : N.A.

Vapor Density (AIR = 1) : N.A.

Evaporation Rate (Buty1 Acetate) : N.A.

Solubility in Water : N.A.

Appearance and Odor , Button Shape, Odorless

Prepared 02 January 2011

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SECTION IV – Fire and Explosion Hazard Data
Flash Point (Method Used) : N.A.
Flammable Limits : N.A.
LEL : N.A.
UEL : 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 the battery in fire – May Explode
Do not short-circuit the battery – May cause burns
Emergency Responders should wear self-contained breathing apparatus. If the battery fire, it is permissible to use any class of extinguishing medium on these batteries or their packing material. Cooled the case of batteries if exposed to fire to prevent rupture

SECTION V – Reactivity Data
Stability:
Unstable Conditions to Avoid
Incompatibility : Materials to Avoid
Hazardous Decomposition or Byproducts
When heated, battery may emit hazardous vapour of KOH/NaOH
The Alkaline Button Battery do not meet any of the criteria established in 40CFR 26102 of reavtivity

SECTION VI – Health Hazard Data
Route(s) of Entry
Inhalation : N.A.
Skin : N.A.
Ingestion : 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

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SECTION VII – First Aid Measures
First Aid Procedures
If electrolyte leakage occurs and makes contact with skin, wash with plenty of the water immediately.
If electrolyte comes into contact with eyes, wash with copious amounts of the water of fifteen minutes(15 mins.), and contact a physician
If electrolyte vapors are inhaled, provide fresh air and seek medical attention if respiratory irritation develops. Ventilate the contaminated area.

***SECTION VIII* – Accidental Release or Spillage**
Steps to be taken in case material is released or spilled
Batteries that are leakage should be handled with rubber gloves and collected in a leak-proof container
Avoid direct contact with electrolyte
Wear protective clothing and a positive pressure Self-Contained Breathing Apparatus (SCBA)

***SECTION IX* – Handling and Storage**
Safe handling and storage advice
Batteries extremely sensitive to adverse effects of humidity. Be sure store it in dry place, have a little temperature.
Do not place it near the boiler and radiator, nor expose to direct sun light. Do not dispose of the fire and recharge the battery, also short circuit is avoid
Never disassemble a battery
Do not breathe cell vapors or touch internal material with bare hands
Keep batteries between -30℃ and 35℃ for prolong storage.

***SECTION X* – Exposure Controls / Person Protection**
Ventilation Requirements : N.A.
Respiratory Protection : N.A.
Eyes Protection : N.A.
Gloves : N.A.

***SECTION XI* – Ecological Information : N.A.**

***SECTION XII* – Disposal Method :** Dispose of the batteries according to government regulations.

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***SECTION XIII* – Regulatory Information:** Batteries are not classified as dangerous goods by US Department of Transportation or the major international regulatory bodies and are therefore not regulated. SARA/TITLE III – As an article, this battery and its contents are not subject to the requirements of the Emergency Planning and Community Right to Know Act.

***SECTION XIV* – Transport Information**

The Batteries in all forms of transportation (e.g. Truck, air, or sea) must be packaged in a safe and responsible manner. Regulatory concerns form all agencies for safe packaging require that batteries be packaged in s manner that prevents short circuits and be contained in (Strong Carton / Packaging) that prevents spillage of contents.

Alkaline battery (sometime referred to as "***Dry Cell***" are not listed as dangerous goods under the **IATA Dangerous Goods Regulation, 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 requirement contained in the following special provisions.

Regulatory Parties	Special Provisions
ADR	295 - 304, 598,
IMDG	295 - 303
UN, ICAO	295 - 303
US DOT	49 CFR 172.102 Provision 130
IATA,	A123,

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 IATA Dangerous Goods Regulations ICAO Technical Instructions require the words " Not Restricted" and the Special Provision No: A123 be provided on the air waybill, when an air waybill is issued.

***SECTION XV* – Other Information :** None