



Test Report

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Material Safety Data Sheet for Alkaline Button cell LR41, LR1130, LR44

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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 – Information of Manufacturer

Manufacturer's Name

New Leader Battery Industry Ltd.,

Emergency Telephone Number 852 27906280

Address (Number, Street, City State, and ZIP Code)

Rm A, 4/F, Block 1, Camelpaint Industrial Building, 62 Hoi Yuen road, Kwun Tong., Hong Kong

Telephone Number for information

852 2790 6280

Signature of Preparer (optional)

Section II – Hazardous Ingredients / Identity Information

Hazardous Components:

Description: Approximate % of total weight

Mercury 0.0005 Wt% (Mercury Free type)

Mercury 0.15 % (Regular Type)

Lead 0.001 – 0.004 Wt%

Zinc 3 – 10 Wt%

Manganese Dioxide 10 – 30 Wt%

KOH/NaOH solution 5 – 11 Wt%

Section III – Physical / Chemical Characteristics

Boiling Point

N.A. Specific Gravity (H₂O=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

button or cylindrical shape, odorless

Section IV – Hazard Classification

Classification

N.A.



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Section V – Reactivity Data

Stability Unstable

Conditions to Avoid Stable

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

When heated, battery may emit hazardous vapour of KOH/NaOH and Hg Hazardous (Regular type)

Polymerization May Occur Conditions to Avoid

Will Not Occur

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.

Section VII – First Aid Measures

First Aid Procedures

If electrolyte leakage occurs and makes contact with skin, wash with plenty of water immediately.

If electrolyte comes into contact with eyes, wash with copious amounts of water for fifteen (15) minutes, 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 – Fire and Explosion Hazard Data

Flash Point (Method Used)

N.A.

Ignition Temp.

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 of battery in fire – may explode.

Do not short-circuit battery – may cause burns.



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Section IX – Accidental Release or Spillage

Steps to Be Taken in Case Material is Released or Spilled

Batteries that are leaking should be handled with rubber gloves.

Avoid direct contact with electrolyte.

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

Section X – Handling and Storage

Safe handling and storage advice

The battery is extremely sensitive to adverse effects of humidity. Be sure to store them in a place which is dry and subject to little temperature change. Do not place near the boiler or radiator, nor expose to direct sun light. Do not dispose of the battery in fire. Do not charge the battery.

Do not short-circuit the battery. Do not put in backward position. Do not store in disorderly fashion, or allow metal objects to be mixed with stored batteries. Do not disassemble the battery, handling in such manner can cause the battery to explode, leak and injury.

Section XI – Exposure Controls / Person Protection

Occupational Exposure Limits: LTEP

N.A.

STEP

N.A.

Respiratory Protection (Specify Type)

N.A.

Ventilation Local Exhausts

N.A.

Special

N.A.

Mechanical (General)

N.A.

Other

N.A.

Protective Gloves

N.A.

Eye Protection

N.A.

Other Protective Clothing or Equipment

N.A.

Work / Hygienic Practices

N.A.

Section XII – Ecological Information

N.A.

Section XIII – Disposal Method

Dispose of batteries according to government regulations.



新利達電池實業有限公司

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Section XIV – Transportation Information

NL batteries are considered to be “Dry cell” batteries and are unregulated for purposes of transportation by the U.S. Department of Transportation (DOT), International Civil Aviation Administration (ICAO), International Air Transport Association (IATA) and International Maritime Dangerous Goods Regulations (IMDG). The only DOT requirement for shipping these batteries is special provision 130 which states: “Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (For example, by the effective insulation of exposed terminals). As of 50th Edition (2009) IATA requires that batteries being transported by air must be protected from short-circuiting and protected from movement that could lead to short-circuiting.

Section XV – Regulatory Information

Special requirement be according to the local regulatory.

Section XVI – Other Information

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

Section XVII – 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.