

### *Material Safety Data Sheet for LR44 0.% Hg Alkaline Type Button cell*

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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 **DONGGUAN LINGLI BATTERY COMPANY LIMITED**

Emergency Telephone Number 13713316164

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

Youjiu Industrial Aream, WanJiang District, DongGuan City, GuangDong Province, China 523039

Telephone Number for information 86-769-22707737

Signature of Preparer (optional)

#### Section II - Hazardous Ingredients / Identity Information ( REACH )

1	2	3	4	5	6	7
Substance name	%	Chemical Identification		Weight (g)	Proportion of Product	Is the Substance Pre-registered?
		CAS#	EINECS #			
Zinc	10.0%	7440-66-6		0.2		NO
Manganese Dioxide	30.0%	1313-13-9		0.6		NO
Graphite	3.0%	7782-42-5		0.06		NO
Iron	37.0%	7439-89-6		0.74		NO
Potassium Hydroxide	8.0%	7646-85-7		0.16		NO
Distilled Water	12.0%	7732-18-5		0.24		NO

#### 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 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

**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.

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#### **Section XIV – Transportation Information**

NEW LEADER 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). The only requirements for shipping these batteries by ICAO and IATA is Special Provision A123 which states : “An electrical battery or battery powered device having the potential of dangerous evolutions of heat that is not prepared so as to prevent a short-circuit (e.g. in the case of batteries, by the effective insulation of exposed terminals; or in the case of equipment, by disconnection of the battery and protection of exposed terminals) is forbidden from transportation.” The international Maritime Dangerous Goods Code (IMDG) regulate them for ocean transportation under Special Provision 304 which says : Batteries, dry, containing corrosive electrolyte which will not flow out of the battery if the battery case is cracked are not subject to the provision of this Code provided the batteries are securely packed and protected against short-circuits. Example of such batteries are : alkali-manganese, zinc-carbon, nickel metal hydride and nickel-cadmium batteries. Non-dangerous goods. Such battery have been packed in inner packaging in such a manner as to effectively prevent short circuit and movement that could lead to short circuit.

#### **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.