

# YONG JIN Mercury Free Button Material Safety Data Sheet

## 0% Hg LR Series

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

Yong Jin Battery Industry Ltd.,

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

Hui Zhou Shi Hui Yang Qu SHan Tian Yong Jin Dian Zi Chang

98#,Middle Of The Chan An Road,Sha Tian Town Hui Yang Hui Zhou City

July,20, 2010

Signature of Preparer (optional)

### Section II - Hazardous Ingredients / Identity Information

Hazardous Components:

Description: Approximate % of total weight

Mercury Lower than 5 ppm

Lead 0.001 - 0.003 Wt%

Zinc 3 – 10 Wt%

Manganese Dioxide 10 – 30 Wt %

### Section III - Physical / Chemical Characteristics

Boiling Point 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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0%Hg LR41(AG3) LR1130 (AG 10) LR44 (AG 13)

## Section V – Reactivity Data

Stability Unstable

Conditions to Avoid

Stable

Incompatibility (Materials to Avoid)

KOH/NaOH solution 5 – 11 Wt%

N.A. Specific Gravity (H<sub>2</sub>O=1)

Hazardous Decomposition or Byproducts

Hazardous

Polymerization May Occur Conditions to Avoid

Will Not Occur X

## 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.

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## 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.

## 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

When heated, battery may emit hazardous vapour of KOH/NaOH and Hg

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

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## 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.

## 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 example, by the effective insulation of exposed terminals). As of 1/1/97 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

## 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.