

Material Safety Data Sheet

Issuing Date 17-Sep-2012

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Revision Number 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name LR44
Recommended Use Alkaline battery.

Supplier Address

Hi-Watt Battery Industry Co., Ltd.
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HK
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Company Emergency Phone Number 852-2348 0111

2. HAZARDS IDENTIFICATION

Emergency Overview

This product is an article. No exposure to hazardous chemicals is expected to occur during intended product use. Misuse of the product may result in exposure to hazardous chemicals.

Appearance Silver	Physical State Solid.	Odor No information available
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OSHA Regulatory Status This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

Potential Health Effects

Principle Routes of Exposure Eye contact. Skin contact.

Acute Toxicity

Eyes In case of rupture: Corrosive to the eyes and may cause severe damage including blindness.
Skin In case of rupture: Causes burns.
Inhalation In case of rupture: Harmful by inhalation.
Ingestion Harmful if swallowed. In case of rupture: Ingestion causes burns of the upper digestive and respiratory tract.

Chronic Effects

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risks of irreversible effects.

Aggravated Medical Conditions

Pre-existing eye disorders. Skin disorders. Respiratory disorders.

Environmental Hazard

See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

4. FIRST AID MEASURES

General Advice	This is a battery. In case of rupture: Immediate medical attention is required.
Eye Contact	Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.
Skin Contact	Immediate medical attention is required. Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Inhalation	Call a physician or Poison Control Center immediately. Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Ingestion	Immediate medical attention is required. Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Drink plenty of water. Never give anything by mouth to an unconscious person. Remove from exposure, lie down.
Notes to Physician	Treat symptomatically. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.

5. FIRE-FIGHTING MEASURES

Flammable Properties	Fire or intense heat may cause violent rupture of packages
Flash Point	Not determined.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Hazardous Combustion Products	Carbon oxides. Hazardous metal fumes and oxides.
<u>Explosion Data</u>	
Sensitivity to Mechanical Impact	No.
Specific Hazards Arising from the Chemical	Sealed containers may rupture when heated The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. In the event of fire and/or explosion do not breathe fumes.
Sensitivity to Static Discharge	No.
Protective Equipment and Precautions for Firefighters	
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.	

NFPA **Health Hazard 1** **Flammability 0** **Stability 0** **Physical and Chemical Hazards -**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Do not touch or walk through spilled material.
Environmental Precautions	Should not be released into the environment. Refer to protective measures listed in Sections 7 and 8.
Methods for Containment	Prevent further leakage or spillage if safe to do so.
Methods for Cleaning Up	In case of rupture: Use personal protective equipment. Take up mechanically and collect in suitable container for disposal.

7. HANDLING AND STORAGE

Handling	In case of rupture: Handle product only in closed system or provide appropriate exhaust ventilation at machinery. Avoid contact with skin, eyes and clothing.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children. Keep in properly labeled containers.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures Showers
 Eyewash stations
 Ventilation systems

Personal Protective Equipment

Eye/Face Protection
Skin and Body Protection
Respiratory Protection

Tightly fitting safety goggles. Face-shield.
 Protective gloves.
 No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Silver.	Odor	No information available.
Odor Threshold	No information available	Physical State	Solid
pH	No information available	Autoignition Temperature	No information available
Flash Point	No information available.	Boiling Point/Range	No information available
Decomposition Temperature	No information available	Explosion Limits	No information available
Melting Point/Range	No information available	Solubility	No information available
Flammability Limits in Air	No information available	Vapor Pressure	No data available
Water Solubility	Immiscible in water	Partition Coefficient: n-octanol/water	
Evaporation Rate	No information available		
Vapor Density	No data available		

10. STABILITY AND REACTIVITY

Stability	Stable under recommended storage conditions.
Incompatible Products	Incompatible with strong acids and bases. Incompatible with oxidizing agents.
Conditions to Avoid	Heat.
Hazardous Decomposition Products	Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides. Metal oxides.
Hazardous Polymerization	Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

LD50 Oral VALUE	8305.328 mg/kg (rat) estimated
LD50 Dermal VALUE	
LC50 Inhalation (DUST) VALUE	
LC50 Inhalation (VAPOR) VALUE	

Chronic Toxicity

Chronic Toxicity	Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risks of irreversible effects.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen. IARC: (International Agency for Research on Cancer) Group 3 - Not Classifiable as to Carcinogenicity in Humans
Target Organ Effects	Eyes. Respiratory system. Skin.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The environmental impact of this product has not been fully investigated. Do not release to air, waters, or soil

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements. Dispose of in accordance with local regulations
Contaminated Packaging	Do not re-use empty containers.
California Hazardous Waste Codes	181

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

<u>DOT</u>	NOT REGULATED
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Exempt
DSL Not determined

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Supplier Trade Secret	X	X	X		X
Supplier Trade Secret			X	X	X
Supplier Trade Secret	X	X	X		X

International Regulations

Mexico - Grade Minimum risk, Grade 0

Chemical Name	Carcinogen Status	Exposure Limits
Supplier Trade Secret		Mexico: TWA= 0.2 mg/m ³

Canada

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

WHMIS Hazard Class

Non-controlled



Chemical Name	NPRI
Supplier Trade Secret	X
Supplier Trade Secret	X

Legend

NPRI - National Pollutant Release Inventory

16. OTHER INFORMATION

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General Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet