



俊利實業有限公司

WELL LINK
INDUSTRIAL LTD

KINETIC® Battery Manufacturer & Exporter

香港葵涌和宜合道63號麗晶中心A座11樓1116-17室
Rm. 1116-17, Tower A, Regent Ctr., 63 Wo Yi Hop Rd., Kwai Chung, Hong Kong
Tel: (852) 2481-8893 Fax: (852) 2480-4837 Website: <http://www.kinetic-battery.com>
E-mail: sales@well-link.com.hk sales@kinetic-battery.com

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MATERIAL SAFETY DATA SHEET (MSDS)

SECTION I – PRODUCT AND MANUFACTURER INFORMATION

PRODUCT IDENTIFICATION

Product Name: Lithium Metal Battery, UN3090
Model: CR2032
Chemical Systems: Lithium Manganese Dioxide
Sizes: All
Designed for Recharge: No

Well Link Industrial Limited
Rm. 1116-17 Tower A, Regent Centre
63 Wo Yi Hop Rd., Kwai Chung, NT., Hong Kong
Telephone Number for Information: 852-24818893
Date Prepared: January, 2024

SECTION II – HAZARDS IDENTIFICATION

- Ingestion
- Inhalation
- Skin Contact
- Eye Contact

SECTION III – INFORMATION ON INGREDIENTS

WARNING: The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful.

MATERIAL OR INGREDIENTS	% W. t.	TLV (ACGIH Threshold Limit Values)
Lithium (CAS# 7439-93-2)	1-6	None Established
Manganese Dioxide (CAS# 1313-13-9)	35-45	0.2mg/m ³ TWA (as Mn)
Organic Electrolyte (N/A)	13-15	3.5mg/m ³ TWA
Graphite (CAS# 7782-42-5)	1-3	2mg/m ³ TWA (respirable fraction)
Stainless Steel (CAS# 7439-89-6)	32-50	NA

The lithium content for the goods in this shipment is as follows,

Model	Wt. of Lithium Metal (gram)	Packing Instructions
CR2032	0.062	968 IB



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SECTION IV – FIRST-AID MEASURES

Ingestion:

Swallowing a battery can be harmful. Seek medical attention immediately. Call The National Battery Ingestion Hotline (202-625-3333) collect, day or night, for advice and follow-up.

Inhalation:

Contents of an open battery can cause respiratory irritation. Provide fresh air and seek medical attention.

Skin Contact:

Contents of an open battery can cause skin irritation and/or chemical burns. Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

Eye Contact:

Contents of an open battery can cause severe irritation and/or chemical burns. Immediately flush eyes thoroughly with copious quantities of flowing lukewarm water for a minimum of 15 minutes. Seek immediate medical attention.

SECTION V – FIRE FIGHTING MEASURES

Fire fighters should wear self-contained breathing apparatus to avoid inhalation of hazardous decomposition products including lithium hydroxide fumes.

SECTION VI - SPILL OR LEAK PROCEDURES

Procedures to Contain and Clean Up Leaks or Spills:

In the event of a battery rupture, prevent skin contact. Earth or sand should be used to absorb the exudation, seal leaking battery and earth in a heavy duty polythene bag and dispose of as Special Waste in accordance with local regulations.

Reporting Procedure:

Report all spills in accordance with Federal, State and Local reporting requirements.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Storage:

Store in a cool, dry, and well-ventilated area. Elevated temperature can result in shortened battery life and degrade performance. Storing unpackaged cells together could result in cell shorting and heat build-up.

Mechanical Containment:

PROFESSIONAL BATTERY MANUFACTURER: NiMH rechargeable battery . NiCd rechargeable battery . Li-Ion rechargeable battery . Lithium polymer rechargeable battery . SLA rechargeable battery . Alkaline battery . Lithium battery . Zinc chloride battery . Carbon zinc battery



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Do not obstruct safety release vents on batteries. Encapsulation (potting) of batteries will not allow cell venting and can cause high-pressure rupture.

Handling:

Do not short circuit which will cause the battery to lose energy. Sources of short circuits include jumbled batteries in bulk containers, metal jewelry, and metal covered tables or metal belts used for assembly of batteries into devices.

If soldering or welding to the battery is required, use of tabbed batteries is recommended.

Do not recharge, over-discharge, force discharge, open, deform, mutilate, crush, pierce, or disassemble battery. Follow manufacturer's recommendations regarding maximum recommended currents and operating temperature range.

SECTION VIII – PERSONAL PROTECTION

Respiratory Protection (Specify Type)	Not necessary under normal conditions
Ventilation	Not necessary under normal conditions
Protective Gloves	Not necessary under normal conditions
Eye Protection	Not necessary under normal conditions
Other Protective Clothing	Not necessary under normal conditions

SECTION IX - PHYSICAL DATA

Boiling Point @ 760 mm Hg (°C)	NA unless individual components exposed
Vapor Pressure (mm Hg @ 25 °C)	NA unless individual components exposed
Vapor Density (Air = 1)	NA unless individual components exposed
Density (grams/cc)	NA unless individual components exposed
Percent Volatile by Volume (%)	NA unless individual components exposed
Evaporation Rate (Butyl Acetate = 1)	NA unless individual components exposed
Physical State	NA unless individual components exposed
Solubility in Water (% by Weight)	NA unless individual components exposed
pH	NA as supplied
Appearance	Geometric solid object, cylindrical shape
Odor	If leaking, smells of medical ether



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SECTION X - REACTIVITY DATA

Stable or Unstable	Stable
Conditions to Avoid	Heat above 70°C or incinerate. Deform. Mutilate. Crush. Pierce. Disassemble. Recharge. Short Circuit. Expose over a long period to humid conditions.
Materials to Avoid (Incompatibility)	Oxidizing agents, alkalis, water
Hazardous Reactions	Lithium metal reacts with water to produce highly flammable gasses
Hazardous Decomposition Reactions	Toxic fumes and foam peroxides

SECTION XI - HEALTH HAZARD DATA

Under normal conditions of use, the battery is hermetically sealed. (Note: Carbon Black is listed as possible carcinogen by IARC)

Threshold Limit Value (TLV) and Source	NA
Effects of Overexposure	None (In fire or rupture situation, see section II and IV)

SECTION XII - FIRE AND EXPLOSION HAZARD DATA

Flash Point	NA unless individual components exposed
Flammable Limits in Air (%)	NA unless individual components exposed
Lower (LEL)	NA unless individual components exposed
Upper (LEL)	NA unless individual components exposed
Extinguishing Media	CO ₂ extinguishers or copious quantities of water or water-based foam can be used to cool down burning Li-MnO ₂ batteries and control the spread of fire. When lithium metal is exposed, use only Class D fire extinguishing agent.
Auto-Ignition	NA unless individual components exposed

SECTION XIII – DISPOSAL METHOD

Disposal in accordance with Federal, State and Local regulations.



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SECTION XIV – TRANSPORTATION

Effective January 1, 2023, all KINETIC batteries with lithium metal content no more than 1gram / cell or 2 gram per battery can be shipped by air in accordance with International Civil Aviation Organization (ICAO), Section IB or International Air Transport Association (IATA) current 64th 2023 edition, PI968 Lithium Metal Batteries in Compliance with Section IB. The goods are classified as class 9 Dangerous goods and can be shipped by cargo aircraft only.

Effective January 1, 2023, all KINETIC batteries with lithium metal content more than 1gram / cell or 2 gram per battery can be shipped by air in accordance with International Civil Aviation Organization (ICAO), Section IA or International Air Transport Association (IATA) current 64th 2023 edition, PI968 Lithium Metal Batteries in Compliance with Section IA. The goods are classified as class 9 Dangerous goods and can be shipped by cargo aircraft only.

We confirmed that all KINETIC lithium batteries

- are in compliance with the relevance PI968 section IA or IB according to the battery lithium content
- meet the requirements of the UN manual of test and criteria, Part III, subsection 38.3.
- are packed securely to prevent short circuits or accidental activation
- are packed in the package which is capable of withstanding a 1.2m drop test.

Lithium metal batteries with lithium metal content no more than 1gram / cell or 2 gram per battery can be shipped as normal goods in sea shipment under the IMDG special provision SP188. We confirmed that all KINETIC lithium metal batteries are manufactured in accordance with the requirements of the UN Manual of Tests and Criteria, are packaged in completely enclosed inner packages and are protected against short circuits and accidental activation.

Lithium batteries are exempted from the DOT Hazardous Materials Subchapter as long as they are separated to prevent short circuits and packed in strong packing for conditions normally encountered in transportation.

SECTION XV – REGULATORY INFORMATION

These products are “article(s)” that do not release a covered toxic chemical under the normal conditions of processing or use. They are not subject to the requirements of the Emergency Planning and Community Right-To-Know Act. Notification is not required.

SECTION XVI – OTHER INFORMATION

Important Note:

The battery referenced herein is defined as “article” and is NOT subject to the 29 CFR 1910.1200 OSHA Hazard Communication Standard requirement or to the Canadian WHMIS requirement. Hence, a material safety data sheet (MSDS) is not required. The information and recommendation set forth herein are supplied as a service. They are made in good faith and believed to be accurate as of the date of preparation. Well Link makes no warranty, either express or implied, with respect to this information and disclaims all liability from reliance on it.