宜昌力佳科技有限公司
Yichang Power Glory Technology Co., ltd.
中国湖北省宜昌市猇亭区先锋路 19 号
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# MATERIAL SAFETY DATA SHEET

Reference No.:PGB-OMCR203224

The batteries are exempt articles and are not subject to the OSHA Hazard Communication Standard Requirement. This sheet is provided as technical information only. The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. However, Power Glory makes no warranty expressed or Implied.

## Section 1-Product and Company Identification

| | | |
|---|---|---|
| Product Name:<br>Lithium Manganese Dioxide Batteries | CHEMICAL SYSTEM:<br>Lithium Manganese Dioxide | Volts:<br>3 V |
| Size:<br>CR2032 | Trade Mark:<br>Omnergy | Approximate Weight:<br>3.2 g |
| Designed for Recharge:<br>NO | Date of preparation:<br>Jan 01 2024 | |
| Company:<br>Yichang Power Glory Technology Co., ltd. | | Fax Numbers:<br>+86- (0)717-6300188 |
| Address (Number, Street, City, State, and ZIP Code):<br>No.19,Xian feng Road,Xiaoting District,Yichang city,Hubeiprovince,China | | |

## Section 2- Composition/Information on Ingredients

| Ingredient | CAS NO. | Content (wt%) |
|---|---|---|
| Lithium | 7439-93-2 | 2.0 (0.064 gram) |
| Propylene Carbonate | 108-32-7 | 3.4 |
| Manganese dioxide | 1313-13-9 | 29.0 |
| 1,2-Dimethoxyethane | 110-71-4 | 2.2 |
| Lithium perchlorate | 7791-03-9 | 1.7 |
| Graphite | 7782-42-5 | 3.4 |
| 1,3-dioxolane | 646-06-0 | 3.9 |
| Polypropylene | 9003-07-0 | 4.1 |
| Teflon | 9002-84-0 | 0.3 |

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| | | |
|---|---|---|
| Stainless steel | 7439-89-6 | 50.0 |

## Section 3 – Hazards Identification

Hazards Identification:

The bettery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN38.3

Emergency Overview：

Caution：Avoid contact and inhalation the electrolyte contained inside the battery

## Section 4 – First Aid Measures

None unless internal materials exposure. If contents are leaked out, observe following Instructions

| | |
|---|---|
| Inhalation | Fumes can cause respiratory irritation . Remove to fresh air and consult a physician. |
| Skin | Immediately flush skin plenty of water. If itch or irritation by chemical bum persists, consult a physician. |
| Eyes | Immediately flush eye with plenty of water for at least 15 minutes. Consult a physician immediately |
| Ingestion | If swallowing a battery, consult a physician immediately. If contents come into mouth, immediately rinse by plenty of water and consult a physician. |

## Section 5-Fire Fighting Measures

Fire extinguishing agent: When the fire is caused by lithium, dry graphite powder and dry sand should be used to extinguish the flame and isolate the air and water fog. Do not use direct running water, foam or halide to extinguish the fire, direct running water may cause the splash of flammable liquid and spread the fire.

Specific dangers from chemicals: Lithium metal can spontaneously ignite in air when heated to a molten state. Reaction with water or acid releases hydrogen and energy causing combustion or even explosion. After burning, the molten material is dispersed, and white smoke is released, which makes the fire all shaded.

Special protective action for firefighters: Firefighters should wear self-contained positive pressure breathing apparatus and wear fire protective clothing to prevent skin and eye contact. Put out the fire upwind. Evacuate all personnel to a safe area.

## Section 6-Accidental Release Measures

Accidental Releases: Do not breathe vapors or touch liquid with bare hands (see section 4).

Waste Disposal Methods: Evacuate area. If possible, a trained person should attempt to stop or contain the leak by neutralizing spill with soda lime or baking soda. A NIOSH Approved Acid Gas Filter Mask or Self-Contained Breathing Apparatus should be worn. Seal leaking battery and soda lime or baking soda in a plastic bag and dispose of as hazardous waste.

Other: Follow North American Emergency Response Guide (NAERG)#138 for cells involved in an accident, cells that have vented, or have exploded.

## Section 7-Handling and Storage

1) Handling

Never swallow. Never reverse the positive and negative terminals when mounting . Never short-circuit the battery. Never heat. Never expose to open flame. Never disassemble. Never weld the terminal or wire to the body of the battery directly. Never touch the liquid leaked out of battery . Never bring fire close to battery liquid. Never keep in touch with

battery.

2) Storage

Never let the battery contact with water. Never store the battery in hot and high humid place. Don't push the battery excessively and destroy the battery packaging, often wet and ventilating the dry place to keep in the normal atmospheric temperature, find the unusual battery is dealt with in time

## Section 8 – Exposure Controls, Personal Protection

| | | |
|---|---|---|
| Respiratory Protection | | NA |
| Ventilation | Local Exhaust | NA |
| | Mechanical | NA |
| | Special | NA |
| | Other | NA |
| Eye Protection | | NA |
| Protective Gloves | | NA |
| Other protective clothing | | NA |

## Section 9 – Physical/Chemical Characteristics

State of matter: Solid state
Form : Button type
Color: True quality of stainless steel
Smell : Tasteless ( At the time of the fullness)
Resolve temperature: NA
Spontaneous combustion temperature: NA
Explosion demarcation line : Higher than 170 degrees Centigrade of batteries will be burnt
To the density ( Water =1): NA
Dissolving: NA

| | |
|---|---|
| Boiling Point: | 1,2-Dimethoxyethane : 83℃ |
| Vapor Pressure: | 1,2-Dimethoxyethane :6.40(20℃) |
| Vapor Density: | 1,2-Dimethoxyethane : 3.11 |
| Solubility in Water: | 1,2-Dimethoxyethane : :diffluence contact with water |
| Specific Gravity: | 1,2-Dimethoxyethane :1.63 |
| Melting Point: | 1,2-Dimethoxyethane :-67℃ |
| Evaporation Rate: | N/A |
| Water Reactive: | 1,2-Dimethoxyethane : :diffluence contact with water |
| Appearance & Odor: | 1,2-Dimethoxyethane : achromatism liquid; slight aether odor. |

## Section 10 – Stability and Reactivity

| | |
|---|---|
| Stability | Stable |
| Incompatibility | Water |
| Hazardous polymerization | Will not occur. |
| Condition to avoid | See section 7. |
| Hazardous Decomposition or Byproducts | Hydrogen |

## Section 11 – Toxicological Information

Acute Toxicity:
1,2-Dimethoxyethane:
$LC_{50}$ (Inhalation): N/A
$LD_{50}$ : N/A
Eye Effects: Corrosive
Skin Effects: Corrosive

## Section 12 –Ecological Information

Aquatic Toxicity: Do not let internal components enter marine environments. Avoid releases into waterways, wastewater or groundwater.

## Section 13 – Disposal condition

The battery may be regulated by national or local regulation. Please follow the instructions of Proper regulation. As electric capacity is left in a discarded battery and it comes into contact With other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.

## Section 14 – Transportation Information

| | |
|---|---|
| **IATA:** | **Proper shipping Name**：Lithium metal batteries/packed with equipment/contained in equipment |
| | **UN Number:**UN3090/UN3091 |
| | The battery has passed the test items of UN Model Regulations, Manual of tests and Criteria, part III,Sub-section 38.3. According to to IATA DGR 65th Edition ,PACKING INSTRUCTION 968-970 of section II or IB for transportation. |
| **IMO**： | **Proper shipping Name**：Lithium metal batteries/packed with equipment/contained in equipment |
| | **UN Number:**UN3090/UN3091 |
| | The battery has passed the test items of UN Model Regulations, Manual of tests and Criteria, part III, Sub-section 38.3. The goods is not restricted to IMO IMDG code （Amend 41-22）according To special provision 188. |

## Section 15-Regulatory Information

US DOT.

Effective December 29,2004,the DOT requires that the outside of each package the contains primary lithium batteries, regardless of size of number of batteries, batteries, be labeled with the following statement, " PRIMARY LITHIUM BATTERIES-FOBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT", The labeling requirement covers shipments via highway, rail vessel or cargo-only aircraft and covers all shipment inside, into or out of the US. The label must be in contrasting color and the letters must be 12mm(0.5 in) in height for packages weighing more than 30Kg and 6mm (0.25 in) in height for packages weighting less than 30Kg

## Section 16-Other Information

If you want further information, please contact:
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