Material Safety Data Sheet – InSight Vet CGM Lithium Manganese Dioxide Battery

Section 1 – Product and Company Identification

Manufacturer: Woodley Equipment Company Ltd.
Old Station Park Buildings, St. John Street, Horwich, Bolton, BL6 7NY, UK
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Product Name: Lithium Manganese Dioxide Battery
Model: CR3
Ratings: 3.0V, 26mAh
Lithium Content: 0.0078g

Section 2 – Composition/Information on Ingredients

Chemical Name	CAS Number	Concentration or Concentration Ranges (%)
Manganese Dioxide	1313-13-9	12 – 50
Lithium Metal	7439-93-2	0.5 – 6
1,2-dimethoxyethane	110-71-4	1.5 – 3.5
Lithium Perchlorate	7791-03-9	0.2 – 0.7
Organic Electrolyte	N/A	2.5 – 7
Steel	7439-89-6, 7440-47-3	30 – 35
Polypropylene	9003-07-0	0.5 – 10

Note: CAS Number is Chemical Abstract Service Registry Number.
N/A = Not applicable.

Section 3 – Hazard Identification

Hazard Identification: Not dangerous with normal use. Do not dismantle, open or shred the battery ingredients contained within as the ingredient products could be harmful.

Primary Route(s) of Exposure: Inhalation, ingestion, skin contact or eye contact.

Potential Health Effects:

- Inhalation – Vapours or mists from a ruptured battery may cause respiratory irritation.
- Ingestion – The battery ingredients contained within or the ingredient products can cause serious chemical burns of the mouth, oesophagus and gastrointestinal tract.
- Skin – Skin contact with the contents of an open battery can cause severe irritation or burns to the skin.

- Eye – Eye contact with the contacts of an open battery can cause severe irritation or burns to the eye.

Section 4 – First Aid Measures

Skin Contact: Remove contaminated clothing and wash contacted skin with soap and water. clothing. If pain or irritation occurs, seek medical attention immediately.

Eye Contact: Flush open eye under running water for 15 minutes or longer. If pain or irritation occurs, seek medical attention immediately.

Ingestion: Rinse mouth with water and seek medical attention immediately.

Section 5 – Fire Fighting Measures

Characteristic of Hazard: Toxic fumes, gases or vapours may evolve on burning.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide, lithium oxide fumes etc.

Fire Extinguishing Methods and Media: Please use water, dry sand and other proper fire extinguishing media.

Protective Equipment: Anti-gas masks and full fire-fighting suits.

Section 6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Measures: Restrict access to area until completion of clean up. Do no touch the spilled materials. Wear adequate personal protective equipment.

Environmental Protection: Prevent material from contaminating soil and entering sewers or waterways.

Methods for Materials and Containment: Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.

Methods for Materials and Cleaning: Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to the directions in Section 13. Scrub the area with detergent and water; collect all contained cleaning water for proper disposal.

Section 7 – Handling and Storage

Handling: Do not handle the batteries in a manner that allows terminals to short circuit. Do not open, disassemble, crush or burn the batteries.

Storage: For long-term storage, store the battery at 25°C±5°C, 60±25% RH.

Do not store the batteries haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

Keep out of the reach of children.

Do not expose the battery to heat or fire. Avoid storing in direct sunlight.

Do not store together with oxidising and acidic materials.

Section 8 – Exposure Controls and Personal Protection

Engineering Controls: No engineering controls are required for handling batteries that have not been damaged. Personal protective equipment for damaged batteries should include chemical resistant gloves and safety glasses.

Personal Protective Equipment:

- Respiratory Protection – In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory protection is not necessary under conditions of normal use.
- Protective Gloves – Not necessary under conditions of normal use.
- Other Protective Clothing or Equipment – Not necessary under conditions of normal use.
- Personal Protection Recommended for Venting Battery – Respiratory protection, protective gloves, protective clothing and safety glasses with side shields.

Section 9 – Physical and Chemical Properties

Appearance: Silver.

Physical State: Solid.

Form: Irregular solid.

Odour: Odourless.

Solubility: Partially soluble in water.

Section 10 – Stability and Reactivity

Stability: Stable under normal ambient storage and handling temperatures.

Conditions to Avoid: Temperatures above +70°C. Incineration, deformation, mutilation, crushing, disassembly, overcharging, short circuiting and exposure to humid conditions over a long period of time.

Hazardous Decomposition Products: Toxic fumes may form peroxides.

Possibility of Hazardous Reaction: If the battery leaks, make sure it does not come into contact with strong oxidisers, mineral acids, strong alkalis and halogenated hydrocarbons.

Section 11 – Toxicological Information

Irritation: In the event of exposure to internal contents, vapour fumes may be irritating to the eyes and skin.

Sensitisation: Not applicable.

Reproductive Toxicity: Not applicable.

Toxicological Synergistic Materials: Not applicable.

Section 12 – Ecological Information

General: Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Anticipated Behaviour of a Chemical Product in Environment/Possible Environmental Impact/Ecotoxicity: Not applicable.

Mobility in Soil: Not applicable.

Persistence and Degradability: Not applicable.

Section 13 – Disposal Considerations

Waste Treatment: Recycle or dispose of waste in accordance with applicable country, federal, state and local regulations.

Attention for Waste Treatment: Batteries should not be treated as ordinary waste. They should not be thrown into fire or in places with high temperatures. They should not be dissected, pierced or crushed etc. The best way to dispose of batteries is to recycle them.

Section 14 – Transport Information

The battery passed the test items of the UNITED NATIONS "Recommendations on the Transport of Dangerous Goods. Manual of Test and Criteria" section 38.3 and meets the requirements of the UNITED NATIONS "Recommendations on the Transport of Dangerous Goods, Model Regulations".

The battery should be protected so as to prevent short circuits. This includes protection against contact with conductive materials within the same packaging that could lead to short circuit.

The packaging should be adequate to avoid mechanical damage during transport, handling and stacking.

The package must be handled with care and knowledge that a flammability hazard exists if the package is damaged.

With regards to transport, the following regulations are cited and considered:

- The International Civil Aviation Organization(ICAO) Technical Instructions
- The International Air transport Association (IATA) Dangerous Goods Regulations

The battery can be shipped by air according to PACKING INSTRUCTION 968 Section IB, or PACKING INSTRUCTION 969~970 Section II of the 2024 IATA Dangerous Goods Regulations 65th Edition.

UN Number: UN3090 or UN3091

UN Proper Shipping name/Description (Technical Name): Lithium metal batteries or Lithium metal batteries packed with equipment or Lithium metal batteries contained in equipment.

UN Classification (Transport Hazard Class): Class 9 (PI968 Section IB) or not applicable (PI969~970 Section II).

UN Packing Group: Not applicable.

- The International Maritime Dangerous Goods (IMDG) Code

UN Number: UN3090 or UN3091

UN Proper Shipping name/Description (Technical Name): Lithium metal batteries or Lithium metal batteries packed with equipment or Lithium metal batteries contained in equipment.

UN Classification (Transport Hazard Class): Not applicable.

UN Packing Group: Not applicable.

The battery is not restricted according to IMO IMDG Code (inc. Amendment 41-22) Special Provision 188.

Section 15 – Regulatory Information

International Civil Aviation Organization (ICAO) Technical Instructions

1. Unless exempt according to ICAO TI, the lithium ion cell/batteries (UN 3480, PI 965) and lithium metal cell/batteries (UN3090, PI 968) are forbidden for carriage on passenger aircraft.
2. Unless approved according to ICAO TI, Lithium ion cells/batteries (UN 3480, PI965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.

Section 16 – Other Information

To the best of our knowledge, the information provided herein is accurate but does not purport to be all inclusive. It is intended to provide a general guidance in terms of safe handling, storage and disposal of materials. Woodley Equipment Company thus assumes no liabilities for any damage or loss resulting from handling or from contact with this product. Contact Woodley Equipment Company if additional information is needed.

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