PRODUCT SAFETY DATA SHEET

LITHIUM-IRON DISULFIDE BATTERY in PICO NPWT DEVICE

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product
Product Name: LITHIUM-IRON DISULFIDE BATTERY in PICO NPWT DEVICE
Other Names:
Manufacturer’s Product Code: Energizer L91
Use: Battery contained in PICO negative pressure wound therapy device.

Supplier
Company: Smith & Nephew Pty. Limited
Address: 85 Waterloo Road, North Ryde, NSW 2113
Telephone No.: Customer Service: (02) 9857 3999
Toll Free (Australia): 13 13 60
Toll Free (New Zealand): 0800 657 799
Emergency Tel. Nos.: (02) 9857 3999 (business hours)

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification: NON-HAZARDOUS SUBSTANCE. DANGEROUS GOODS.
Hazards Overview: None under normal conditions of use. The battery should not be opened or burned. Exposure to the ingredients contained within or their combustion products could be harmful. In the event of fire, burning batteries produce toxic and corrosive fumes. Contents of open batteries may cause irritation or chemical burns.

Risk Phrases: -
Safety Phrases: -

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Proportion (%/wt.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Disulfide</td>
<td>1309-36-0</td>
<td>28-38</td>
</tr>
<tr>
<td>1,3-Dioxolane</td>
<td>646-06-0</td>
<td>5-9</td>
</tr>
<tr>
<td>Lithium or Lithium Alloy</td>
<td>7439-93-2</td>
<td>6-7</td>
</tr>
<tr>
<td>1,2-Dimethoxyethane</td>
<td>110-71-4</td>
<td>2-4</td>
</tr>
<tr>
<td>Carbon Black</td>
<td>1333-86-4</td>
<td>0-4</td>
</tr>
<tr>
<td>Graphite</td>
<td>7782-42-5</td>
<td>0-4</td>
</tr>
<tr>
<td>Lithium Iodide</td>
<td>10377-51-2</td>
<td>0.3-3</td>
</tr>
<tr>
<td>Non-Hazardous Components:</td>
<td></td>
<td>18-22</td>
</tr>
<tr>
<td>Steel (Iron CAS# 65997-19-5), Plastic, Other</td>
<td></td>
<td>Balance</td>
</tr>
</tbody>
</table>
SECTION 4 – FIRST AID MEASURES

Swallowed
If battery or open battery is ingested, do not induce vomiting or give food or drink. Seek medical attention immediately.

Eye
Immediately flush eyes thoroughly with water for at least 15 minutes, lifting upper and lower eyelids, until no evidence of the chemical remains. Seek medical attention.

Skin
Remove contaminated clothing and wash skin with soap and water. If a chemical burn occurs or if irritation persists, seek medical attention.

Inhaled
Provide fresh air and seek medical attention.

First-Aid Facilities
Washing facilities recommended, in the event of exposure to battery contents.

Advice to Doctor
Treat symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Hazards From
Combustion
Products
Burning lithium-iron disulphide batteries produce toxic and corrosive lithium hydroxide fumes and sulphur dioxide gas.

Suitable
Extinguishing
Media
Use extinguishing media suitable for lithium metal.

Fire-fighting
Procedures
Wear self-contained breathing apparatus.

In case of fire where lithium batteries are present, flood area with water or smother with an extinguishing agent appropriate for lithium metal. Water may not extinguish burning batteries but will cool adjacent batteries and control the spread of fire. Burning batteries will burn themselves out. Virtually all fires involving lithium batteries can be controlled by flooding with water. However, the contents of the battery will react with water and form hydrogen gas. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended. A smothering agent will extinguish burning lithium batteries.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill / Leak
Procedure
To clean up leaking batteries: Room ventilation may be required. Avoid exposure to electrolyte fumes. Wear safety glasses with side shields if handling an open or leaking battery. Use neoprene or natural rubber gloves. Place material into suitable leak-proof containers for disposal. Follow local regulations for disposal of batteries.
SECTION 7 – HANDLING AND STORAGE

Handling Advice

No special protective clothing is required for normal handling of the battery. Accidental short circuit for a few seconds will not seriously affect the battery. Prolonged short circuit will cause the battery to lose energy, generate significant heat and can cause the safety release vent to open. Sources of short circuits include jumbled batteries in bulk containers, metal jewellery, metal covered tables or metal belts used for assembly of batteries into devices. Damaging a lithium battery may result in an internal short circuit.

The contents of an open battery, including a vented battery, when exposed to water, may result in a fire and/or explosion. Crushed or damaged batteries may result in a fire.

This battery is is not designed for recharging. Recharging can cause battery leakage or, in some cases, high pressure rupture. Inadvertent charging can occur if a battery is installed backwards.

Storage Advice

Store in a cool, well-ventilated area. Elevated temperatures can result in shortened battery life. In locations that handle large quantities of lithium batteries, such as warehouses, lithium batteries should be isolated from unnecessary combustibles.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>PEL (OSHA)</th>
<th>TLV (ACGIH)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon Black</td>
<td>3.5 mg/m TWA</td>
<td>3.5 mg/m TWA</td>
</tr>
<tr>
<td>1,2-Dimethoxyethane</td>
<td>None established</td>
<td>None established</td>
</tr>
<tr>
<td>1,3-Dioxolane</td>
<td>None established</td>
<td>20 ppm TWA</td>
</tr>
<tr>
<td>Graphite</td>
<td>15 mg/m TWA (total dust)</td>
<td>2 mg/m TWA (respirable fraction)</td>
</tr>
<tr>
<td>Iron Disulfide</td>
<td>5 mg/m TWA (respirable fraction)</td>
<td>None established</td>
</tr>
<tr>
<td>Lithium or Lithium Alloy</td>
<td>None established</td>
<td>None established</td>
</tr>
<tr>
<td>Lithium Iodide</td>
<td>None established</td>
<td>None established</td>
</tr>
</tbody>
</table>

Engineering Controls

Store in a cool, well-ventilated area.

Personal Protection

Not required during normal conditions. If handling open or leaking batteries, wear safety glasses with side shields and neoprene or natural rubber gloves. In the event of a fire, wear self-contained breathing apparatus.
SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance and Odour**: Solid, hermetically sealed battery, no odour.
- **Melting Point / Boiling Point**: Not applicable.
- **Vapour Pressure**: Not applicable.
- **Vapour Density (Air=1)**: Not applicable.
- **Density (g/mm$^3$)**: 1.7-2.0
- **Flashpoint**: Not determined.
- **Flammability Limits (FL) (%)**: Not determined.
- **Autoignition Temperature**: Not determined.
- **Solubility in Water (g/L)**: Not applicable.
- **Percent volatile by volume**: Not applicable.

SECTION 10 – STABILITY AND REACTIVITY

- **Stability**: Stable under normal conditions of use.
- **Conditions to Avoid**: Avoid exposure to heat and open flames.
- **Incompatible Materials**: None during normal operation.
- **Hazardous Decomposition Products**: None during normal operating conditions. Burning lithium-iron disulphide batteries produce toxic and corrosive lithium hydroxide fumes and sulphur dioxide gas.
- **Hazardous Polymerisation**: None identified.

SECTION 11 - TOXICOLOGICAL INFORMATION

Under normal conditions of use, lithium ion disulfide batteries are non-toxic.

**Acute Effects**
- **Swallowed**: Swallowing a battery can be harmful. Contents of an open battery can cause serious chemical burns or mouth, oesophagus and gastrointestinal tract.
- **Eye**: Contents of an open battery can cause severe irritation and chemical burns.
- **Skin**: Contents of an open battery can cause skin irritation and/or chemical burns. Dimethoxyethane and dioxolane may be absorbed through the skin, causing localised irritation.
- **Inhaled**: Contents of an open battery can cause respiratory irritation.

**Chronic Effects**: Not available.

SECTION 12 – ECOLOGICAL INFORMATION

**Environmental**: No data available.
PRODUCT SAFETY DATA SHEET

LITHIUM-IRON DISULFIDE BATTERY in PICO NPWT DEVICE        PSDS No. 195 Rev0

Issues
Persistence & Degradability No data available.
Mobility No data available.

SECTION 13 – DISPOSAL CONSIDERATIONS

Method of Disposal
Dispose of according to local waste regulations.

SECTION 14 – TRANSPORT INFORMATION

Lithium-iron disulfide batteries are exempt from the classification as dangerous goods as they meet the requirements of the special provisions listed below. (Essentially, they are properly packaged and labelled, contain less than 1 gram of lithium and pass the tests defined in UN Manual of Tests and Criteria section 38.3).

UN No. 3091
Subsidiary Risk(s) -
Packing Group II
Shipping Name LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT
Other Subject to Special Provisions SP 188 and SP 230.

SECTION 15 – REGULATORY INFORMATION

Poison Schedule Not a Scheduled Poison.

SECTION 16 – OTHER INFORMATION

CONTACT POINT: CUSTOMER SERVICE Telephone: (02) 9857 3999
Date of Issue: 24 May 2017

This SDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this SDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company. Our responsibility for products sold is subject to our standard terms and conditions, a copy of which is sent to our customers and is also available on request.
### REVISION HISTORY

<table>
<thead>
<tr>
<th>Revision Number</th>
<th>Description of Change</th>
<th>Effective Device</th>
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<tr>
<td>0</td>
<td>First Issue as a Product Safety Data Sheet. This replaces the Material Safety Data Sheet, MSDS 195 Lithium-Ion Disulfide Battery (PICO)</td>
<td>24-05-2017</td>
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