| Product Safety Data Sheet | Document No. | 925S-06907 |
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| | Issue | 02.01 |
| | Date Last Amended | June 2026 |
| | Last Amended by | D. Heath |
| Document Title | LB15V Lithium Battery Module PSDS | |

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| **Product Name:** | safeSEA V200 Primary Lithium Battery Module | | **Type №:** | LB15V 901S-06658 | |
| **For use with:** | safeSEA V200 GMDSS VHF Handheld Radio | | | | |
| **Chemistry:** | $LiMnO_2$ | **Total Weight:** | 68g | **Nominal Voltage:** | 6V |
| **Construction:** | Battery module containing two 603448 cells connected in series. | | | | |
| **Lithium weight/cell:** | 0.6g | | **Total lithium weight/battery:** | | 1.2g |

## Section 1 – Manufacturer Information

**Manufactured by:** ShenZhen EPT Battery Co., Ltd. Building 3, Huancheng Industrial Park, No. 41 Dalang North Road, Dalang, Longhua District, Shenzhen, 518109 Guangdong, P.R. China

**Telephone number:** +86-755-28078063

## Section 2 – Hazards Identification

This battery module is a sealed unit. The batteries are not hazardous when used according to the instructions of the manufacturer under normal conditions. In case of abuse, there is hazard of rupture, fire, heat, leakage of internal components which could cause casualty loss. Abuses including, but not limited to, the following cases: charged for long time, short circuited, put into fire, whacked with hard object, punctured with acute object, crushed and broken. Should the battery be damaged to cause leakage of the cell contents, the following hazards should be noted:

**Ingestion:** Swallowing the contents of a damaged battery can be harmful

**Inhalation:** Contents of a damaged battery can cause respiratory irritation

**Skin Contact:** Contents of a damaged battery can cause irritation

**Eye Contact:** Contents of a damaged battery can cause severe irritation

## Section 3 – Ingredients

Important Note: This battery module should not be opened or burned. Exposure to the contents may be harmful.

| Material / Ingredient | CAS Number | PEL (OSHA) | TLV (ACGIH) | %/wt. |
|---|---|---|---|---|
| Lithium | 7439-93-2 | None Established | None Established | 6% |
| Lithium Perchlorate | 7791-03-9 | None Established | None Established | 10.3% |
| Manganese Dioxide | 1313-13-9 | None Established | None Established | 58.5% |
| Propylene Carbonate | 108-32-7 | None Established | None Established | 10% |
| Ethylene Glycol Dimethyl Ether | 115-10-6 | None Established | None Established | 0.3% |
| Propylene | 9003-07-1 | None Established | None Established | 3.6% |
| Nickel | 7440-02-0 | None Established | None Established | 1.7% |
| Aluminium | 7429-90-5 | None Established | None Established | 9.6% |

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## Section 4 – First Aid Measures

The following advice applies only to damaged battery packs that are leaking:

**Ingestion:** Seek medical attention. DO NOT induce vomiting or give food or drink.

**Inhalation:** Seek medical attention. Remove from exposure and move to fresh air immediately. Use oxygen if available.

**Skin Contact:** Seek medical attention. Remove any contaminated clothing and rinse skin with plenty of water or shower for 15 minutes.

**Eye Contact:** Seek medical attention. Immediately flush eyes with water for a minimum of 15 minutes. Ensure that both upper and lower eyelids are lifted during the flushing process.

## Section 5 – Fire Fighting Measures

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| Characteristics of Hazard | The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapours. |
| Hazardous Combustion Products | Carbon Dioxide. |
| Fire-extinguishing methods and extinguishing media | Use extinguishing measures that are appropriate to local circumstances and surrounding environment.* |
| Attention in Fire-extinguishing | Wear self-contained breathing apparatus and full protective gear. |

*In case of fire involving lithium batteries, flood the area with water or smother with a class D fire extinguishing material suitable for lithium metal. (e.g. Lith-X)

**Note:** Water may not completely extinguish burning lithium batteries but will keep adjacent batteries cool reducing the risk of the fire spreading. As burning batteries will burn themselves out, flooding with water will control virtually all fires involving lithium batteries. However, the contents of lithium batteries will react with water to release hydrogen gas. In enclosed spaces this can cause an explosive mixture. Use a smothering agent in enclosed spaces which will extinguish burning lithium batteries.

Fire responders should wear self-contained breathing apparatus.

## Section 6 – Accidental Release Measures

Attention! Corrosive Material. In case of rupture the following actions are recommended:

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| Personal precautions, protective equipment and emergency procedures: | Avoid contact with skin, eyes and clothing, Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Refer to protective measures in Section 7 and Section 8. |
| Environmental precautions: | Prevent product from contaminating soil and from entering sewers or waterways. |
| Methods and materials for containment: | Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately. |
| Methods and materials for cleaning up: | 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 according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal. |

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## Section 7 – Handling and Storage

**Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Elevated temperature may result in shortened battery life. Store locked up. Keep out of reach of children.

**Handling:** The battery may explode or cause burns if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. Prolonged short-circuiting can cause the battery temperature to rise and significantly reduce battery life.

**Charging:** Non-rechargeable batteries: Do not attempt to recharge as may result in rupture.

**Other Precautions:** In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Use personal protection equipment.

## Section 8 – Exposure Controls / Personal Protection

No special requirements are required for this battery under normal circumstances. In case of rupture the following actions are recommended:

**Exposure Control:** Use adequate ventilation to keep airborne concentrations low. If it is used under conditions that generate particulates, the ACGIH TLV-TWA of 3mg/$m^3$ respirable fraction (10mg/$m^3$ total) should be observed.

**Personal Protective Equipment:**

Eye and Face Protection. If there is a hazard of contact use tight sealing safety goggles and face protection shield.

Skin and Body Protection. If there is a hazard of contact wear protective gloves and protective clothing.

Respiratory Protection. If exposure limits are exceeded or irritation is experienced ventilation and evacuation may be required.

## Section 9 – Physical and Chemical Properties

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| Physical State | State: Solid<br>Appearance: Cuboid<br>Colour: Orange<br>Odour: None (if leaking, smells of medical ether) |
| pH | Not applicable for this item |
| Boiling Point at 760mm Hg (°C) | Not applicable for this item |
| Vapour Pressure (mm Hg at 25°C) | Not applicable for this item |
| Vapour Density | Not applicable for this item |
| Relative Density | Not applicable for this item |
| Percent volatile by volume (%) | Not applicable for this item |
| Evaporation Rate | Not applicable for this item |
| Solubility (water) | Not applicable for this item |
| Solubility (other) | Not applicable for this item |

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## Section 10 – Stability and Reactivity

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| Chemical Stability | Stable under recommended storage conditions. |
| Possibility of Hazardous Reactions | None under normal processing. |
| Conditions to Avoid | Exposure to air or moisture over prolonged periods. |
| Incompatible Materials | Acids, Oxidizing Agents, Bases |
| Hazardous Decomposition Products | Carbon Oxides. |

## Section 11 – Toxicological Information

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| Irritation | In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin. |
| Sensitization | Not available |
| Reproductive Toxicity | Not available |
| Toxicologically Synergistic Materials | Not available |

## Section 12 – Ecological Information

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| General Note | 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 available |

## Section 13 – Disposal Considerations

**Waste Treatment:** Recycle or dispose of in accordance with government, state and local regulations.

**Attention for Waste Treatment:** Deserted batteries shouldn't be treated as ordinary trash; shouldn't be thrown into fire or placed in high temperature; shouldn't be dissected, pierced, crushed or treated similarly. The best disposal method is recycling.

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## Section 14 – Transport Information

This battery module has been tested in accordance with subsection 38.3 of part III of the UN Manual of Tests and Criteria. Summary test reports are available from Ocean Signal on request.

The packaging used for our battery products has been successfully tested and complies with the 3 metre stack test requirement outlined in the IATA Dangerous Goods Regulation (DGR). The test verified the ability of the packaging to withstand a superimposed load representative of stacking during transport.

This battery module should be transported by air in accordance with the IATA dangerous goods regulations 67th edition, class 9, UN3090, proper name "Lithium metal batteries" and packed according to packing instruction 968 section Ib.

When supplied with equipment it is class 9, UN3091, proper name "Lithium metal batteries packed with equipment" and should be packed in accordance with packing instruction 969 section II.

The LB15V battery can be carried as personal luggage with the V200 VHF Radio on board aircraft under the conditions of clause 2.3.5.8 of the IATA dangerous goods regulations.

The battery modules may be transported by road under special provision 188 of the ADR and IMDG.

## Section 15 – Regulatory Information

This battery module has been manufactured in accordance with applicable requirements of:

- Regulation (EU) 2023/1542 concerning batteries and waste batteries;
- Directive 2011/65/EU (RoHS);
- EC REACH Regulation EC1907/2006
- applicable transport regulations including UN38.3, IATA DGR, ADR and IMDG.

No additional regulatory requirements are identified for this battery module under normal conditions of use.

## Section 16 – Other

No information

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