

Material Safety Data Sheet

Eleven Energy Galvani Sodium Battery

Section 1: Chemical Product and Company Identification

Product Name: Sodium Battery

Model: ELB-4.5-02

Manufacturer: Eleven Energy

Address: 28 Chesterton Road, Cambridge, United Kingdom, CB4 3AZ

Contact Information: info@elevenenergy.co.uk

Emergency Phone: +44 1638 750 660

Section 2: Composition/Information on Ingredients

| Chemical Name | Percent of Content | CAS No. |
|---|--------------------|------------|
| Sodium Copper Iron Manganese Layered Oxide | 34.2% - 38.2% | 7440-50-8 |
| Carbon | 30.5% - 34.5% | 7440-44-0 |
| Aluminium | 14.26% - 15.64% | 7429-90-5 |
| Sodium Hexafluorophosphate | 0.31% - 0.51% | 21324-39-0 |
| Sodium Perchlorate | 0.11% - 0.35% | 7601-89-0 |
| Dimethyl Carbonate | 0.12% - 0.39% | 616-38-6 |
| Ethyl Carbonate | 0.17% - 0.26% | 105-58-8 |

| | | |
|-------------------------|---------------|-----------|
| Ethyl-Methyl Carbonate | 0.16% - 0.28% | 623-53-0 |
| Carboxymethyl Cellulose | 0.12% - 0.51% | 9004-32-4 |

Section 3: Hazards Identification

Emergency Overview:

- **Physical State:** Solid
- **Odour:** None
- **Health Hazards:** Exposure to leaking electrolyte may cause eye irritation, skin burns, and respiratory issues.

Potential Health Effects:

- **Eye Contact:** Irritation and burns.
 - **Skin Contact:** Irritation and burns.
 - **Inhalation:** Respiratory irritation from vapours of a leaking battery.
 - **Ingestion:** Harmful; may cause severe internal damage.
-

Section 4: First Aid Measures

- **Eye Contact:** Flush with water for 15 minutes and seek medical attention.
 - **Skin Contact:** Wash with soap and water; seek medical attention if irritation persists.
 - **Inhalation:** Move to fresh air; consult a physician if symptoms persist.
 - **Ingestion:** Do not induce vomiting; seek immediate medical attention.
-

Section 5: Fire Fighting Measures

- **Extinguishing Media:** Dry chemical, foam, or CO₂ extinguishers are recommended.
 - **Hazards:** Batteries may explode at high temperatures or if exposed to fire.
 - **Firefighting Procedures:** Wear full protective clothing and self-contained breathing apparatus.
-

Section 6: Accidental Release Measures

- **Personal Precautions:** Wear protective gloves and safety glasses.
 - **Environmental Precautions:** Prevent released materials from entering waterways.
 - **Cleanup Methods:** Collect spilled material in an appropriate container and dispose of according to local regulations.
-

Section 7: Handling and Storage

- **Handling:** Avoid short-circuiting, crushing, or puncturing the battery.
 - **Storage:** Store in a cool, dry, and well-ventilated area away from heat sources. Recommended temperature: -10°C to 35°C.
-

Section 8: Exposure Controls/Personal Protection

- **Engineering Controls:** Adequate ventilation is recommended during handling.
- **Personal Protection:** Use safety glasses and chemical-resistant gloves if handling damaged batteries.

Section 9: Physical and Chemical Properties

- **State:** Solid
 - **Odour:** None
 - **pH:** Not applicable
 - **Boiling Point:** Not applicable
 - **Solubility in Water:** Insoluble
-

Section 10: Stability and Reactivity

- **Stability:** Stable under normal conditions.
 - **Conditions to Avoid:** Avoid exposure to high temperatures, direct sunlight, and water.
 - **Hazardous Decomposition Products:** May release toxic fumes if damaged or burned.
-

Section 11: Toxicological Information

- **Acute Toxicity:** Not anticipated during normal use.
 - **Chronic Effects:** Long-term exposure to leaking materials may cause irritation.
-

Section 12: Ecological Information

- **Environmental Impact:** Proper disposal minimises environmental risks.
 - **Precautions:** Avoid releasing battery components into water systems.
-

Section 13: Disposal Considerations

- **Disposal:** Dispose of batteries in accordance with local and national regulations. Do not incinerate or dispose of in fire.
 - **Recycling:** Recycling is encouraged where facilities exist.
-

Section 14: Transport Information

- **UN Number:** 3551
 - **Shipping Class:** Class 9
 - **Packaging Requirements:** Ensure protection against short-circuits and physical damage.
-

Section 15: Regulatory Information

- **Compliance:** This product complies with relevant transport and handling regulations for sodium batteries.
-

Section 16: Other Information

Prepared by: Eleven Energy

Date: 16/02/2026

Disclaimer: This MSDS is based on the best knowledge available. It does not replace proper handling and safety training for the product.