

## Safety Data Sheet (SDS) Compliant with OSHA Hazard Communication Standard (29 CFR 1910.1200)

### **Rechargeable Lithium-Ion Battery**

**Model:** 18650

**Nominal Voltage:** 3.7V

**Capacity:** 2600mAh, 3200mAh, 3600mAh

**Revision Date:** January 2025

### 1. Identification

Product Identifier: Rechargeable Li-ion Battery Cell, 18650, 3.7V, 2600mAh, 3200mAh, 3600mAh.

Recommended Use: Portable energy storage in electronic devices such as UV inspection lamps and flashlights.

Restrictions on Use: Do not disassemble, crush, heat, or incinerate.

Distributor/Supplier: Spectro-UV

Address: 4 Dubon Court

Telephone: (516) 986-9116

Email: [sales@spectro-uv.com](mailto:sales@spectro-uv.com)

Website: [www.spectro-uv.com](http://www.spectro-uv.com)

### 2. Hazard(s) Identification

Important Note: This battery is a manufactured article. Under normal conditions of use, it poses no immediate health or physical hazards as it is sealed and does not release hazardous chemicals.

GHS Classification: Not classified as hazardous under normal use (exempt as article per some interpretations but provided for foreseeable emergencies).

Hazards if Damaged or Abused:

- Risk of thermal runaway, fire, explosion, or venting with flames.
- Electrolyte leakage: Corrosive (skin/eye burns), irritating to respiratory system.
- Fumes may include toxic gases (HF, CO, CO<sub>2</sub>).

Signal Word: None (intact battery); Danger (if internal contents are released due to damage or leakage)

Hazard Statements: May cause severe skin burns and eye damage; harmful if swallowed or inhaled (internal contents).

### 3. Composition/Information on Ingredients

The battery is a sealed article, with no exposure to ingredients under normal handling.

Chemical Name	CAS No.	Concentration (%)
Lithium Transition Metal Oxide (e.g., LiNiMnCoO <sub>2</sub> or LiCoO <sub>2</sub> )	Proprietary	30–45
Graphite/Carbon	7440-44-0	15–30
Organic Electrolyte (e.g., LiPF <sub>6</sub> in carbonate solvents like EC/DMC)	Mixture	10–20
Copper Foil	7440-50-8	5–15
Aluminum Foil	7429-90-5	5–15
Polymer Separator/Steel Can	Proprietary	Balance

No free metallic lithium present.





### 4. First-Aid Measures

General: Only required if battery is damaged and contents are exposed.

- Inhalation: Move to fresh air; provide oxygen if needed; seek medical attention.
- Skin Contact: Rinse with plenty of water for 15+ minutes; remove contaminated clothing; seek medical help for burns.
- Eye Contact: Flush with water for 20+ minutes; seek immediate medical attention.
- Ingestion: Rinse mouth; do not induce vomiting; seek immediate medical attention.

## First Aid for Lithium-Ion Battery Damage/Leak Exposure

Only if battery is damaged and contents are exposed

Inhalation	Skin Contact
 <p>Move to fresh air immediately. Provide oxygen if breathing is difficult. Seek medical attention.</p>	 <p>Rinse with plenty of water for at least 15 minutes. Remove contaminated clothing. Seek medical help for burns.</p>
Eye Contact	Ingestion
 <p>Flush eyes with water for at least 20 minutes. Seek immediate medical attention.</p>	 <p>Rinse mouth thoroughly. Do not induce vomiting. Seek immediate medical attention.</p>

*Visual summary of first-aid procedures in case of exposure to battery contents*

## 5. Fire-Fighting Measures

Extinguishing Media: Class D fire extinguisher, dry sand, CO<sub>2</sub>, or dry chemical. Use large amounts of water for cooling (but avoid direct water jet on burning cells to minimize HF gas).

Special Hazards: Thermal runaway possible; emits toxic/corrosive fumes (HF, phosphorus oxides, CO). Risk of explosion.

Protective Equipment: Self-contained breathing apparatus and full protective gear.

## 6. Accidental Release Measures

Personal Precautions: Wear PPE (gloves, goggles, respirator); ventilate area.

Environmental Precautions: Prevent runoff into waterways.

Cleanup: Absorb leaked electrolyte with inert material (sand/vermiculite); place damaged batteries in fire-resistant container; dispose as hazardous waste.

## 7. Handling and Storage

Handling: Avoid short-circuit, puncture, crush, overcharge/discharge, or exposure to heat (>60°C). Use insulated tools.

Storage: Cool, dry, ventilated area (15–25°C); store at 30–50% charge for long-term. Do not stack heavily.

## 8. Exposure Controls/Personal Protection

Exposure Limits: Not applicable for intact batteries. For internal contents: Follow limits for components (e.g., fluoride compounds).

Engineering Controls: Ventilation if handling damaged cells.

PPE: Safety glasses, chemical-resistant gloves if risk of damage.

## 9. Physical and Chemical Properties

Appearance: Cylindrical cell, metal casing.

Odor: Odorless (intact).

pH: Not applicable.

Boiling/Melting Point: Not applicable (sealed).

## 10. Stability and Reactivity

Stability: Stable under normal conditions.

Reactivity: Reacts violently if abused (thermal runaway >150°C).

Incompatible Materials: Water (on burning cells), strong oxidizers.

#### 11. Toxicological Information

Intact Battery: No toxicity.

If Exposed: Electrolyte is corrosive/irritating; potential for burns or fluoride poisoning.

#### 12. Ecological Information

Eco-Toxicity: Harmful to aquatic life if leaked. Do not release into environment.

#### 13. Disposal Considerations

Dispose/recycle as hazardous waste per local regulations, not in regular trash. Use approved recycling programs (Call2Recycle or equivalent).

#### 14. Transport Information

UN Number: UN3480 (batteries alone) or UN3481 (packed with/in equipment), Class 9.

Proper Shipping Name: Lithium-ion batteries.

Requirements: Comply with IATA, IMDG, DOT; pass UN 38.3 tests; ≤30% SOC for air transport.

#### 15. Regulatory Information

Batteries from suppliers selected to meet RoHS (EU Directive 2011/65/EU) and REACH (EC 1907/2006) requirements, as indicated on Spectro-UV product specifications (e.g., CE & RoHS compliant per model listings). Components are TSCA-listed for US imports.

**\*\*Note: \*\*** Per OSHA Hazard Communication Standard (29 CFR 1910.1200) Letters of Interpretation (2015, 2021, 2022), Li-ion batteries are subject to HazCom requirements due to potential chemical exposure in foreseeable emergencies (e.g., damage, venting).

#### 16. Other Information

Spectro-UV distributes these private-labeled rechargeable lithium-ion batteries. The company is not the original manufacturer of battery cells but has selected suppliers whose products comply with relevant safety and transport standards. This SDS is based on

information provided by the upstream supplier/manufacturer and standard industry data for similar 18650 Li-ion cells.

**Disclaimer** This Safety Data Sheet (SDS) is provided to support workplace hazard communication and safety in foreseeable emergencies. Spectro-UV is a distributor of these private-labeled rechargeable lithium-ion batteries and is not the original manufacturer of the battery cells. The information contained herein is based on data provided by the upstream supplier/manufacturer, standard industry references for similar 18650 lithium-ion cells, and publicly available product specifications.

For the most accurate and up-to-date information, including supplier certificates, please contact Spectro-UV.

Regulations and requirements vary by jurisdiction and may change over time. Users are responsible for ensuring compliance with all applicable local, national, and international laws. Consult the original cell manufacturer, regulatory authorities, or a qualified expert for specific compliance needs.

Always handle lithium-ion batteries with care and follow recommended safety practices.

Prepared By: Spectro-UV

Date: January 2025.