

# SAFETY DATA SHEET

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## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

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**NAME:** Li-Ion Cell

**MODEL:** 18650

**RATING:** 1000-2600mAh, 3.7V, 3.7-9.62Wh

**SUPPLIER:** Wilmar LLC

20413 59<sup>th</sup> Pl S. Suite 160

Kent, WA 98032

USA

**TELEPHONE:** (800) 426-1262, (425) 970-6970

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## 2. HAZARDS IDENTIFICATION

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Not dangerous with normal use. Do not dismantle, open or shred the battery ingredients contained within or their ingredients products could be harmful.

**PRIMARY ROUTE(S) OF EXPOSURE:** Inhalation, ingestion, Skin contact and Eye contact.

**POTENTIAL HEALTH EFFECTS:**

**INHALATION:** Vapors or mists from a ruptured battery may cause respiratory irritation.

**INGESTION:** The battery ingredients contained within or their ingredients products can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.

SKIN: Skin contact with contents of an open battery can cause severe irritation or burns to the skin.

EYE: Eye contact with contents of an open battery can cause severe irritation or burns to the eye.

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### 3. COMPOSITION/ INFORMATION ON INGREDIENTS

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Chemical Name	CAS Number	Concentration or concentration ranges (%)
Cobalt lithium manganese nickel oxide	346417-97-8	30-38
Graphite	7782-42-5	15-23
Phosphate(1-), hexafluoro-, lithium	21324-40-3	9-17
Aluminum	7429-90-5	18-25
Polyvinylidene fluoride resin	7440-50-8	0.8-1.6
Rubber, styrene-butadiene, fume	24937-79-9	0.1-1.1
Polyvinylidene fluoride resin	7440-50-8	0.8-1.6
Carbon black	1333-86-4	0-0.8

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### 4. FIRST AID MEASURES

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**INHALATION:** Remove source of contamination or move victim to fresh air. Obtain medical advice.

**ORAL EXPOSURE OR INGESTION:** Rinse mouth thoroughly with water, do not induce vomiting. Seek medical attention immediately. Call the NATIONAL BATTERY INGESTION HOTLINE for advice and follow up at (800-498-8666) day or night.

**SKIN CONTACT:** Remove contaminated clothes and rinse skin with plenty of water or emergency shower for 15 minutes. Get medical aid.

**EYE CONTACT:** Irrigate with flowing water for 15 minutes. If irritation persists, consult a physician.

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## 5. FIRE FIGHTING MEASURES

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**CHARACTERISTICS OF HAZARD:** Toxic fumes, gases or vapors may be released on burning.

**HAZARDOUS COMBUSTION PRODUCTS:** Carbon monoxide, carbon dioxide, lithium oxide fumes.

**FIRE-EXTINGUISHING METHODS AND EXTINGUISHING MEDIA:** Please use water, dry sand, foam, and other proper fire extinguishing media.

**PROTECTION FOR FIRE FIGHTERS AND OTHERS:** Responders should wear self-contained breathing apparatuses and full fire-fighting suits. Prevent contact with skin and eyes. Do not extinguish from a position down wind of the fire. Evacuate those who are not responding.

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## 6. ACCIDENTAL RELEASE MEASURES

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**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Use personal protective equipment. Ensure adequate ventilation, Keep people away from and upwind of spill/leak. Entry to non-involved personnel should be controlled around the leakage area by roping off. Remove all sources of ignition.

**PRECAUTIONS TO PROTECT THE ENVIRONMENT:** Keep product out of sewers and waterways.

**SPILL CLEAN-UP PROCEDURES:** Take all the precautions listed in this document. Use water mixed with abluent to clean up the contaminated

area. Use absorbent. Avoid contact with eyes or skin. Avoid discharge into all sorts of waterways.

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## 7. HANDLING AND STORAGE

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**HANDLING:** Don't handle the batteries in manner that allows terminals to short circuit. Do not open, disassemble, crush or burn battery.

**STORAGE:** If the battery is subject to storage for more than 3 months, it is recommended to recharge the battery periodically.

**LONG PERIOD STORAGE:**  $25\pm 5^{\circ}\text{C}$ ,  $60\pm 25\%$  relative humidity. Do not store the battery haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects.

**KEEP OUT OF REACH OF CHILDREN**

**OTHER CONSIDERATIONS:** Do not expose the battery to heat or fire. Avoid storage in direct sunlight. Do not store together with oxidizing and acidic materials.

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## 8. EXPOSURE CONTROLS, PERSONAL PROTECTION

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**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 IS RECOMMENDED FOR VENTING BATTERY:** Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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**APPEARANCE:** Cylindrical shell

**PHYSICAL STATE:** Solid

**FORM:** Approximate Cylinder

**MELTING POINT:** > 300 degrees C

**ODOR:** Odorless

**SOLUBILITY:** Partially soluble in water

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## 10. STABILITY AND REACTIVITY

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**STABILITY:** Stable under normal temperatures and pressures.

**CONDITIONS TO AVOID:** Heat above 70°C and attempts to incinerate, deform, mutilate, crush, disassemble, overcharge, short circuit, or expose over a long period to humid conditions.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Toxic fumes. May form peroxides.

**POSSIBILITY OF HAZARDOUS REACTION:** If leaks occur, do not contact with strong oxidizers, mineral acids, strong alkalis, halogenated hydrocarbons.

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## 11. TOXICOLOGICAL INFORMATION

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**IRRITATION:** In the event of exposure to internal contents, vapor fumes may be very irritating to the eyes and skin.

**SENSITIZATION:** Not applicable.

**REPRODUCTIVE TOXICITY:** Not applicable.

**TOXICOLOGICALLY SYNERGISTIC MATERIALS:** Not applicable.

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## 12. ECOLOGICAL INFORMATION

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**ENVIRONMENT EFFECT:** Will not have chronic effect on aquatic environments.

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## 13. DISPOSAL CONSIDERATIONS

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**GENERAL NOTE:** Do not allow undiluted product or large quantities of it to reach ground water, sewage system, or waterways.

**WASTE DISPOSAL PROCEDURES:** Recycle or dispose of in accordance with government, state & local regulations. Used batteries may not be treated as ordinary trash. Do not dispose of in fire or high temperature. Do not dissect, pierce, or crush. Recycle.

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## 14. TRANSPORT INFORMATION

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The battery shall be packed and protected to prevent short circuits and must be contained within “strong outer packaging” that prevents spillage. This includes protection against contact with conductive materials within the same packaging that could lead to short circuiting.

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

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

Transport	The battery must meet the requirements of Section 38.3 of the United Nations Recommendation on the Transport of Dangerous Goods Manual of Tests and Criteria
UN Number	UN3480 or UN3481
United Nations designation for transport	Lithium-ion batteries, lithium-ion batteries packaged with the device or lithium-ion batteries built into the device.
UN transport hazard class(es)	Class 9
PG Packing Group	N/A
Packing Performance	Class 9 (PI965 Section IB) or Not applicable (PI966~967 Section II)
Marine pollutant (Y/N)	N
IMDG EMS NO	F-A, S-I
ICAO/IATA	This article can be transported by air in accordance with IATA Dangerous Goods Regulations 2025 66th Edition Packing Instructions 965 Part IA or Packing Instructions 966-967 Part I.
IMDG CODE	In accordance with the International Maritime Dangerous Goods Code (42-24 editions) of the International Maritime Organization.
ADR/RID	Shipping may be done in accordance with the ADR 2025/RID 2025

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## 15. REGULATORY INFORMATION

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International Civil Aviation Organization (ICAO) Technical  
Instructions ICAO (ICAO)

1. Unless exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480 PI 965) and lithium metal cell/batteries (UN 3090 PI 968) are forbidden for carriage on passenger aircraft.
2. Unless approved according to ICAO TI, Lithium ion cells/batteries (UN 3480 PI 965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.

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**16. OTHER INFORMATION**

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The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their purposes.

Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.