



Ascent Battery Supply, LLC  
925 Walnut Ridge Drive  
Hartland, Wisconsin 53029

## Material Safety Data Sheet

## Lithium Ion

The information and recommendations below are believed to be accurate at the date of preparation. Ascent Battery Supply makes 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. This MSDS provides guidelines for safe use and handling of the product. It does not and cannot advise all possible situations. Your specific use of this product should be evaluated to determine if additional precautions must be taken.

<b>Distributed By</b>	Ascent Battery Supply, LLC	<b>Emergency Number</b>	INFOTRAC (800) 535-5053
<b>Address</b>	Ascent Battery Supply 925 Walnut Ridge Drive Hartland, Wisconsin 53029	<b>Overseas Emergency Number</b>	INFOTRAC (352) 323-3500 (Collect)
<b>Revision Date</b>	11/10		

### SECTION 1 – IDENTITY

<b>Product Name</b>	Lithium Ion Battery
<b>Common</b>	Li-Ion
<b>Synonyms</b>	
<b>DOT Description</b>	Dry Battery
<b>Chemical Name</b>	Lithium Ion; Secondary Battery

### SECTION 2 – HAZARDOUS INGREDIENTS

Chemical Name	CAS No.	Percentage %
Lithium Cobalt Oxide	12190-79-3	25-40
Iron	7439-89-6	15-25
Aluminum	7429-90-5	2-6
Graphite		
Natural	7782-42-5	10-20
Artificial	7740-44-0	
Copper	7440-50-8	5-15
Organic Electrolyte		10-20

### SECTION 3 – PHYSICAL AND CHEMICAL CHARACTERISTICS

<b>Boiling Point</b>	NA	<b>Melting Point</b>	NA
<b>Vapor Pressure</b>	NA	<b>Vapor Density</b>	NA
<b>Specific Gravity</b>	NA	<b>Percent Volatile By Volume</b>	NA
<b>Solubility in Water</b>	NA	<b>Reactivity in Water</b>	NA
<b>Appearance and Odor</b>	Geometric, solid object	<b>Evaporation Rate</b>	NA

<b>Flash Point</b>	NA	<b>Flammable Limits in Air % by Volume</b>	NA
<b>Extinguisher Media</b>	Dry chemical type extinguishers or water.	<b>Auto-Ignition Temperature</b>	NA

<b>Special Fire Fighting Procedures</b>	Use a positive pressure self-contained breathing apparatus if batteries are involved in a fire. Full protective clothing is necessary. During water application, caution is advised as burning pieces of flammable particles may be ejected from the fire.
---	--

<b>Unusual Fire and Explosion Hazards</b>	Cells or batteries may flame or leak potentially hazardous organic vapors if exposed to excessive heat or fire. Damaged or opened cells or batteries can result in rapid heating and the release of flammable vapors. Vapors may be heavier than air and may travel along the ground or be moved by ventilation to an ignition source and flash back.
---	---

## SECTION 4 – PHYSICAL HAZARDS

<b>Stable or Unstable</b>	Stable	<b>Conditions to Avoid</b>	Storage above 60°C (140°F). Electrical shorting.
<b>Incompatibility (Materials to Avoid)</b>	NA		
<b>Hazardous Decomposition Products</b>	Carbon Monoxide (CO) and other Volatile Organic Compounds.		

## SECTION 5 – HEALTH HAZARDS

<b>Threshold Limit Value</b>	NA
<b>Signs and Symptoms of Exposure</b>	Irritancy: The electrolytes contained in this battery can irritate eyes with any contact. Prolonged contact with the skin or mucous membranes may cause irritation.
<b>Medical Conditions Generally Caused by Exposure</b>	The materials contained in this battery may only represent a hazard if the integrity of the battery is compromised or if the battery is physically or electrically abused. <b>Acute exposure:</b> Electrolyte may irritate skin and eyes.
<b>Routes of Entry</b>	Skin, Eyes, Swallowing
<b>Emergency and First Aid Procedures for</b>	
<b>1. Inhalation</b>	Get fresh air. If symptoms persist seek medical attention
<b>2. Eyes and Skin</b>	If a cell ruptures, flush with copious quantities of flowing lukewarm water for a minimum of 15 minutes. Get immediate medical attention for eyes. Wash skin with soap and water.
<b>4. Ingestion</b>	Ingestion of battery chemicals can be harmful. Call The National Battery Ingestion Hotline (202-625-3333) 24 hours a day, for procedures treating ingestion of chemicals. Do not induce vomiting.

## SECTION 6 – SPECIAL PROTECTION INFORMATION

<b>Respiratory Protection</b>	NA				
<b>Ventilation</b>	NA	<b>Local Exhaust</b>	NA	<b>Mechanical (General)</b>	NA
<b>Gloves</b>	Wear chemical resistant gloves if cell ruptures, is corroded or leaking chemicals.		<b>Safety Glasses</b>	Always wear safety glasses when working with damaged batteries and cells.	
<b>Other Protective Equipment</b>	In the event of a fire, SCBA should be worn along with thermally protective outer garments.				

## SECTION 7 – SPECIAL PRECAUTIONS – SPILL AND LEAKAGE PROCEDURES

<b>Precautions to be Taken when Handling and Storing</b>	Batteries are designed to be recharged. However, improperly charging a cell or battery may cause the cell or battery to flame. Use only approved chargers and procedures. Never disassemble a battery or bypass any safety device. Should a battery unintentionally be crushed, thus releasing its contents, rubber gloves must be used to handle all battery components. Avoid inhalation of any vapors that may be emitted.
<b>Other Precautions</b>	Do not store batteries above 60 °C or below -32°C. Store batteries in a cool (below 21°C (70°F)), dry area that is subject to little temperature change. Elevated temperatures can result in reduced battery service life. Battery exposure to temperatures in excess of 130°C will result in the battery venting flammable liquid and gases. Do not store batteries in a manner that allows terminals to short circuit.
<b>Steps to be Taken if chemicals are spilled</b>	If cells are leaking or rupture, prevent skin and eye contact and collect all released material in a plastic lined metal container. Personal protective equipment for damaged batteries should include chemical resistant gloves and safety glasses.

---

<b>Waste Disposal</b>	To prevent short circuit, batteries should be completely discharged prior to disposal, terminals taped and/or capped. When completely discharged it is not considered hazardous. This product does not contain any materials listed by the United States EPA as requiring specific waste disposal requirements. These are exempted from the hazardous waste disposal standards under Universal Waste Regulations. Disposal of large quantities of Lithium Ion batteries or cells may be subject to Local, State or Federal / Provincial regulations. Consult your Local, State and Federal / Provincial regulations regarding disposal of these batteries.
-----------------------	--

---

<b>SECTION 8 – TRANSPORTATION AND REGULATORY INFORMATION</b>
--

---

<b>Shipping and Transportation</b>	<p>1) Product is shipped as: <b>Ground (DOT)</b> Non-Hazardous by ground UN3480</p> <p><b>Air (IATA/ICAO)</b> Lithium ion Batteries – Not restricted UN3480</p> <p><b>Sea (IMDG)</b> Lithium ion Batteries – Not restricted</p> <p>(2) Special shipping information. These batteries have been tested to Section 38.3 of ‘UN Manual of Test and Criteria’. PortaPower declares that all lithium ion and lithium polymer batteries do not contain more than:</p> <ul style="list-style-type: none"><li>• 20Wh ELC (Equivalent Lithium Contents) for each cell inside battery.</li><li>• 100Wh ELC (Equivalent Lithium Contents) for each battery.</li></ul> <p>It is below the limits set by the 2010 IATA Dangerous Goods Regulations 51st edition Packing Instruction 965 Section II is applied. And they are out of scope for Special Provision A154. Also the consignment complies with the current edition – 51st 2010 of the IATA regulation</p> <ol style="list-style-type: none"><li>1) Section II of Packing Instruction - PI965 for Lithium Ion Batteries (UN3480)</li><li>2) UN manual of Tests and Criteria, Part III, sub-section 38.3 (withstanding a 1.2m drop (test);</li><li>3) Watt-hour rating is not more than 100 Wh which shown on the batteries</li><li>4) Labeled with a lithium battery handling label</li><li>5) Package permissible gross weight has been observed (Passenger/Cargo Aircraft is 10kg Gross)</li></ol>
------------------------------------	---

---

<b>Regulatory Information</b>	Regulations specifically applicable to the product: <ul style="list-style-type: none"><li>- IATA-DGR (air transportation)</li><li>- IMO-IMDG Code (sea transportation)</li><li>- US Department of Transportation 49 Code of Federal Regulations [USA]</li></ul>
-------------------------------	---

---

<b>Other Information</b>	The information contained herein is furnished without warranty of any kind. Users should consider this data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.
--------------------------	--