

MATERIAL SAFETY DATA SHEET

MSDS046

Ultralife Batteries, Inc.
2000 Technology Parkway
Newark, NY 14513-2175
CAGE Code: 0UU59

Emergency Telephone Number:
Chemtrec for Spills, Leaks, Fires
USA 1-800-424-9300
International 703-527-3887

SECTION I

PRODUCT IDENTIFICATION

Product Name: Ultralife Li-Ion UBBL03

Size: UBBL03, Lithium Ion Battery Pack, 15.2 Volt with 7.5 Ahr of capacity at nominal voltage

Chemistry System: Lithium Cobalt Oxide

SECTION II

PRECAUTIONARY LABELING

Caution: Do not crush, puncture or incinerate.

SECTION III

HAZARDOUS COMPONENTS

Chemical Name	CAS #	Exposure Limits	Percent of Content
Aluminium Foil	7429-90-5	None Listed	.1 – 1.
Biphenyl (BP)	92-52-4	LD50 oral Rat 2400 mg/Kg	.1 – .3
Copper Foil	7440-50-8	LD50 ipr-Mouse 3.5 mg/Kg	.1 - 1.
Linear & Cyclic Carbonate Solvents	N/A	LD50 ~11,000 weighted avg	5. – 16.
Graphite Powder	7440-44-0	LD50 ivn-Mouse 440 mg/Kg	8. – 25.
Lithium Hexafluorophosphate, LiPF ₆	21324-40-3	LC50 Rat: >50 mg/L	1. – 4.
Lithium Cobaltite, LiCoO ₂	12190-79-3	None Listed	8. – 25.
Poly (vinylidene fluoride) PVDF	24937-79-9	None Listed	.1 – 1.
Steel, Nickel, ABS/Polycarbonate Outer Case	N/A	None Listed	Balance

Important Note: The materials in this section may only represent a hazard if the integrity of the battery is compromised or if the battery is physically or electrically abused.

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SECTION IV**PHYSICAL AND CHEMICAL PROPERTIES**

N/A

SECTION V**FIRE AND EXPLOSION DATA**

A. Extinguishing Media

- Water spray, Carbon Dioxide, Dry Chemical Powder or appropriate foam. Use agent appropriate for surrounding materials.

B. Fire Fighting Procedures

- Use a positive pressure self-contained breathing apparatus if batteries are involved in a fire. Extremely corrosive Hydrogen Fluoride gas is produced upon combustion of cell contents.
- Full protective clothing is recommended.

C. Unusual Fire and Explosion Hazards

- Fire or excessive heat may produce hazardous decomposition products. Hydrogen Fluoride, Phosphorus Oxides, Carbon Monoxide, Carbon Dioxide, Lithium Hydroxide, Cobalt Oxides, Aluminum Oxide, possible fluoro-compounds and Carbon soot are combustion products.
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SECTION VI**STORAGE PRECAUTIONS**

- Do not store batteries in a manner that allows terminals to short circuit.
- Store batteries below 140°F (60°C), in a dry area that is subject to little temperature change.
- Do not place near heating equipment, nor expose to direct sunlight for long periods. Elevated temperatures can result in reduced battery service life.

SECTION VII**HANDLING/USE PRECAUTIONS**

A. Battery Disassembly

- Never disassemble a battery.
- 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.
- In the event of skin or eye exposure to the electrolyte, refer to Section VII, First Aid Information.

B. Battery Short Circuit

- More than a momentary short circuit will generally reduce the battery service life.
 - Avoid reversing battery polarity within the battery assembly. To do so will totally disable the battery.
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SECTION VIII**FIRST AID INFORMATION**

A. Electrolyte Contact

- Skin- Not a health hazard
 - Eyes- Immediately flush with plenty of water for at least 15 minutes and get medical attention.
 - Inhalation- Not an inhalation hazard.
 - Ingestion- If swallowed, seek emergency medical aid.
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SECTION IX**DISPOSAL PROCEDURES**

- Batteries may be disposed of as Universal Waste.
- Disposal of large quantities may be subject to Federal, State, or Local regulations.

SECTION X**TRANSPORTATION**

This battery has been tested to Section 38.3 of 'UN Manual of Tests and Criteria' and has passed. The individual cells were tested and passed T1 through T8. Due to the amount of Lithium contained in the Ultralife Lithium Ion Battery it must be shipped as follows: Lithium Batteries, Class 9, UN3090, PGII.

SECTION XI**OTHER INFORMATION**

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.