



Product Name.....: CA-300 Lithium Ion (Li-Ion) Batteries

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- Inhalation  
During normal use inhalation is an unlikely route of exposure due to containment of hazardous materials within the battery case. However, should the batteries be exposed to extreme heat or pressures causing a breach in the battery cell case, exposure to the constituents may occur. Inhalation of vapors may result in pulmonary irritation.
- Medical Conditions Aggravated By Exposure:  
No further data known.
- Carcinogenicity:  
Contains cobalt compounds.

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**Section 3 – Composition / Information On Ingredients**

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Component	Chemical Name
Positive Electrode	Lithium Cobaltate (LiCoO <sub>2</sub> )
Negative Electrode	Graphite
Electrolyte	Ethylene Carbonate (Solvent) C <sub>3</sub> H <sub>4</sub> O <sub>3</sub>
	Diethyl Carbonate (Solvent) C <sub>5</sub> H <sub>10</sub> O <sub>3</sub>
	Lithium Hexafluorophosphate (Salt) LiPF <sub>6</sub>

Does not contain Cd, Hg, or Pb

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**Section 4 – First Aid Measures**

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**EYE CONTACT:**

If contents from an opened battery comes in contact with the eyes, immediately flush eyes thoroughly with water and continue flushing for at least 15 minutes without rubbing. Seek medical attention.

**SKIN CONTACT:**

If the contents from an opened battery come in contact with the skin, wash with soap and water. If irritation persists or contact has been prolonged, seek medical attention.

**INHALATION:**

Remove immediately to fresh air and seek medical attention.

**INGESTION:**

Seek medical attention immediately.

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### Section 5 – Fire Fighting Measures

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#### FIRE AND EXPLOSIVE PROPERTIES:

Flashpoint.....: N/A  
Flammability Limits.....: LEL - N/A  
UEL - N/A

#### EXTINGUISH MEDIA:

In case of fire use CO<sub>2</sub> or Class D fire extinguisher

#### UNUSUAL FIRE AND EXPLOSION HAZARDS:

The materials in these Li-Ion batteries are sealed in a case and do not leak electrolyte under normal usage conditions. However, if exposed to a fire or high temperature, explosion may occur and hazardous materials may be released.

#### FIRE-FIGHTING PROCEDURES AND EQUIPMENT:

Since inhalation of vapors may irritate eyes, nose and throat, use self-contained breathing apparatus.

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### Section 6 – Accidental Release Measures

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#### PERSONAL PRECAUTIONS:

Wear appropriate gloves, safety glasses, and air mask when handling leaking battery or exposed to internal content. Move batteries and contents away from open fire. Provide appropriate ventilation.

#### ENVIRONMENTAL:

Resultant spill residues may be characterized as D002 (caustic) pursuant to the federal Resource Conservation and Recovery Act (RCRA).

#### CLEAN-UP MEASURES:

Spills and leaks are unlikely because cells are contained in a sealed case. If the battery case is breached, wear protective clothing that is impervious to caustic materials and absorb or pack spill residues in inert material.

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### **Section 7 – Handling And Storage**

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#### **HANDLING:**

Short circuit (contacting positive and negative battery terminals with a conductive object) will cause shorter battery life, and may cause release of gas, posing a burn hazard. Batteries placed in bulk containers should not be shaken. Metallic objects in tool boxes can cause short circuit. Do not disassemble, crush, or otherwise abuse the battery. Do not open the battery. Charge only with dedicated/specific chargers designed for this battery.

#### **STORAGE:**

Store in a cool, well-ventilated location. Prevent condensation on cell or battery terminals. Elevated temperatures may result in reduced battery life. Optimum storage temperatures are between 32°F (0°C) and 95°F (35°C). Avoid exposure to static electricity so that no damage will be caused to the protective circuitry of the battery pack.

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### **Section 8 – Exposure Controls / Personal Protection**

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#### **EXPOSURE GUIDELINES:**

None specified

#### **ENGINEERING CONTROLS:**

None required under conditions of normal use. Provide appropriate ventilation in case of electrolyte leakage or exposure.

#### **PERSONAL PROTECTIVE EQUIPMENT:**

- **Eye Protection**  
None required under conditions of normal use. Wear safety glasses when handling leaking battery.
- **Skin Protection**  
None required under conditions of normal use. Wear appropriate gloves when handling leaking battery.
- **Respiratory Protection**  
None required under conditions of normal use. Wear air mask if exposed to internal contents.

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### Section 9 – Physical And Chemical Properties

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Physical Appearance:.....: Sealed Battery

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### Section 10 – Stability And Reactivity

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**STABILITY:**

The battery is stable under normal operating conditions.

**CONDITIONS TO AVOID:**

Open flames, heat, sparks and moisture. Battery should not be disassembled, short-circuited, incinerated or abused.

**INCOMPATIBLE MATERIALS:**

Strong oxidizing agents.

**DECOMPOSITION PRODUCTS MAY INCLUDE:**

Carbon dioxide, carbon monoxide, organic carbonate, hydrogen fluoride, phosphorus fluoride, phosphorus oxides, lithium hydroxide, cobalt oxides, aluminum oxide, carbon soot.

**POSSIBILITY OF HAZARDOUS REACTIONS:**

No additional information known.

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### Section 11 – Toxicological Information

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**ACUTE TOXICITY:** No further toxicological data known.

**CHRONIC:** No further toxicological data known.

**SENSITIZATION:** No further toxicological data known.

**REPRODUCTIVE EFFECTS:** No further toxicological data known.

**TERATOGENIC EFFECTS:** No further toxicological data known.

**MUTAGENICITY:** No further toxicological data known.

**SYNERGISTIC MATERIALS:** No further toxicological data known.

**CARCINOGENICITY:** No further toxicological data known.

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### **Section 12 – Ecological Information**

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#### **ECOTOXICOLOGICAL INFORMATION:**

No information available.

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### **Section 13 – Disposal Consideration**

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#### **WASTE DISPOSAL:**

Li-Ion batteries should not be incinerated or subjected to temperatures in excess of 140°F (60°C). Such treatment can cause cell rupture. In the event of disposal, dispose only in accordance with federal, state and local regulations.

These Li-Ion batteries are classified as hazardous waste and are not safe for disposal in the normal waste stream. The Ridge Tool Company encourages recycling, as these batteries do contain recyclable materials that can be reused. For recycling center locations, call 1-800-822-8837.

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### **Section 14 – Transportation Information**

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UN Number: 3480

Proper Shipping Name: Li ion Battery

This battery is <100Wh and is shipped according to the regulations detailed in US Department of Transportation 49 Code of Federal Regulations for domestic shipping and Packaging instruction P965 of IATA DGR 55<sup>th</sup> edition for international air shipping following either

- a.) PI965, Section 1B as Class 9
  - or
  - b.) PI965, Section II in excepted quantities which is then over packed
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### **Section 15 – Regulatory Information**

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#### **UN – Class:**

Exempt from Dangerous Goods classification because of low lithium content. Lithium ion rechargeable batteries are not subject to the UN Regulations if they meet the following provision: The equivalent Lithium content is not more than 8g per battery pack (and not more than 1.5g per cell). These cells have a lithium equivalent content of 0.63g per cell.

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**Section 16 – Other Information**

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