

**GARMIN.**

# **GARMIN NICKEL CADMIUM BATTERY INFORMATION**

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GARMIN LTD. OR ITS SUBSIDIARIES  
C/O GARMIN INTERNATIONAL  
1200 E. 151ST STREET  
OLATHE, KS 66062 USA

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## NICKEL-CADMIUM BATTERY

This data sheet is applicable to Nickel-Cadmium batteries contained in Garmin Remote Battery Backup for GNC® 250, 250XL, 300, 300XL GPS® 150XL, 155XL and Nickel-Cadmium Battery Kit products.

### I. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Nickel Cadmium Batteries located within above products

Company Name: Garmin International, Inc. 1200 E. 151<sup>st</sup> Street, Olathe, KS 66062

Product Category: Article

CHEMTREC® 24 hr Emergency: US 800-424-9300

CHEMTREC® 24 hr Emergency: AUS 61-290372994, Toll-Free: 1-800-262-8200

CHEMTREC® 24 hr Emergency: International 703-527-3887

### II. HAZARD(S) IDENTIFICATION

Potentially hazardous materials are fully contained in a hermetically sealed case designed to withstand normal handling and use.

Exposure could occur only if the battery or cells have been opened, disassembled, crushed, burned, exposed to high temperatures (> 60°C or 140°F), or subjected to other types of abuse. Exposure to cell contents may be harmful under some circumstances.

### III. COMPOSITION/INFORMATION ON INGREDIENTS

Positive Electrode:

Substance	CAS No.	Concentration
Nickel	7740-02-0	20-32% in aggregate
Nickel Oxide	1313-99-1	
Nickel Hydroxide	12054-48-7	

Negative Electrode:

Substance	CAS No.	Concentration
Cadmium	7440-43-9	13-22% in aggregate
Cadmium Hydroxide	21041-95-2	

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Electrolyte:

Substance	CAS No.	Concentration
Potassium Hydroxide	1310-58-3	0-4% in aggregate
Sodium Hydroxide	1310-73-2	
Lithium Hydroxide	1310-65-2	

## IV. FIRST-AID MEASURES

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Symptoms of Exposure: Under conditions of normal use there should be no exposure to hazardous materials. In the event of an opened battery situation:

- **Inhalation:** Contents of an opened battery cell can cause respiratory irritation or nickel allergy response.
- **Ingestion:** Contents of an opened battery cell can cause stomach irritation or serious chemical burns, cadmium toxicity, unconsciousness, liver and kidney damage. Seek medical help immediately if ingested.
- **Skin Contact:** Contents of an opened battery cell can cause skin irritation.
- **Eye Contact:** Contents of an opened battery cell can cause sever eye damage. Wash with copious amounts of water for at least 15 minutes. Seek medical help immediately.

## V. FIRE-FIGHTING MEASURES

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- **Extinguishing Media:** Water, CO<sub>2</sub>, Dry chemical or foam.
- **Unusual Fire & Explosion Hazards:** Fires in confined spaces or involving large quantities of batteries may produce dangerous fumes. Do not open, crush, disassemble, or incinerate any battery. Do not expose any battery to extreme heat or fire.

## VI. ACCIDENTAL RELEASE MEASURES

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Contain spillage as needed. Restrict access to the area until completion of clean-up. Clean up spilled material immediately. Wear gloves and eye protection. Place contaminated and non-recyclable material in suitable labeled containers for alter disposal. Treat or dispose of waste material in accordance with all local, regional, and national requirements, as applicable.

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## VII. HANDLING AND STORAGE

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- **Storage:** Store in a cool, well-ventilated area, prevent condensation on cell or battery terminals. Elevated temperatures may result in reduced battery life. Optimum storage temperatures are between -31°F and 95°F. Do not store batteries in bulk without isolation protection.
- **Handling:** Do not obstruct safety release vent on batteries. Short circuit will bring high temperature elevation to the battery as well as shorten the battery life. Avoid short circuits as the heat can burn attendant skin and rupture the battery cell case. Batteries packaged in bulk containers should not be shaken.
- **Charging:** This battery is designed for recharging. Observe the specified charge rate since higher rates can cause a rise in internal gas pressure which may result in damaging heat generation or cell rupture or venting.
- **CAUTION:** Do not puncture or otherwise damage the battery or dispose in fire, mix with other battery types, connect improperly or short circuit. May explode or leak causing injury.

## VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

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No protective equipment is necessary under conditions of normal use. In the event of a fire or opened cell:

- **Eye/Face protection:** Goggles and face shield
- **Skin Protection:** Gloves and protective clothing
- **Respiratory Protection:** Inorganic dust respirator

## IX. PHYSICAL AND CHEMICAL PROPERTIES

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- **Appearance:** Cylindrical or prismatic shape
- **Odor:** none
- **pH:** Not Applicable
- **Flash point:** Not applicable unless individual components exposed
- **Flammability:** Not applicable unless individual components exposed

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## X. STABILITY AND REACTIVITY

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Product is stable when used under normal conditions.

**Conditions to avoid:** Heat above 70°C or incinerate. Deform. Mutilate. Crush. Pierce. Disassemble Short circuit. Expose over a long period to humid conditions.

**Materials to avoid:** none

## XI. TOXICOLOGICAL INFORMATION

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There are no known toxicological properties of the batteries during normal handling and use.

## XII. ECOLOGICAL INFORMATION (NON-MANDATORY)

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Under normal use these batteries do not release their ingredients into the environment. Damaged or abused batteries can release small amounts of nickel or cadmium into the environment. Damaged batteries carelessly discarded could release small amounts of nickel or cadmium to storm or surface water. Do not place in fires.

## XIII. DISPOSAL CONSIDERATIONS (NON-MANDATORY)

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Recycle or dispose in accordance with applicable Federal, state, and local regulations. Do not incinerate or heat batteries to temperatures above 100°C (212°F). Nickel-Cadmium batteries are classified as hazardous waste due to the presence of cadmium and must be rec

## XIV. TRANSPORT INFORMATION (NON-MANDATORY)

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Nickel-Cadmium batteries used in Garmin products are considered dry cells and are not subject to hazardous materials (dangerous goods) regulations for the purpose of transportation provided they are securely packaged in a manner that prevents dangerous evolution of heat and protects against short circuit.

# **GARMIN NICKEL CADMIUM BATTERY INFORMATION**



## **XV. REGULATORY INFORMATION (NON-MANDATORY)**

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SARA 313: Notification is not required because these products are article(s) that do not release a covered toxic chemical under the normal conditions of processing or use.

## **XVI. OTHER INFORMATION**

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This information has been compiled from sources considered to be dependable and is, to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty (either expressed or implied) or guarantee is made to the accuracy, reliability or completeness of the information contained herein.