

**GARMIN.**

# **GARMIN LEAD ACID BATTERY INFORMATION**

---

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

# GARMIN LEAD ACID BATTERY INFORMATION

## SEALED RECHARGEABLE LEAD ACID BATTERY

---

This data sheet is applicable to Lead Acid batteries contained in Garmin echo™ Portable Kit products, STRIKER™, Panoptix™ Ice Fishing Bundle, echoMAP™ Portable Kit products.

### I. PRODUCT AND COMPANY IDENTIFICATION

---

Product Name: Lead Acid battery 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

---

- Harmful if swallowed. Liquid can cause severe skin/tissue burns and eye damage
- Overcharging can result in acid mist vapor which can damage lungs if inhaled
- Extremely flammable gas (hydrogen) may be generated during charging
- Ingestion: rinse mouth. Do NOT include vomiting.
- Skin Contact: Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Eye exposure: Rinse cautiously with water for several minutes. Remove contact lenses. Continue rinsing. Always seek medical attention immediately

# GARMIN LEAD ACID BATTERY INFORMATION

## III. COMPOSITION/INFORMATION ON INGREDIENTS

Substance	WT Percent	CAS #
Sulfuric Acid	27.5%	7664-93-9
Lead	22.7%	7439-92-1
Lead Alloy	21.5%	7759-01-5
Lead Oxide	18.0%	1309-60-0
Polypropylene	7.3%	9003-07-0
Polyethylene	3.0%	9002-88-4

## IV. FIRST-AID MEASURES

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

- **Inhalation:** Breathing of sulfuric acid vapors or mists can cause severe respiratory irritation
- **Ingestion:** Contents of an opened battery cell can cause stomach irritation and burns. Seek medical help immediately if ingested.
- **Skin Contact:** Contents of an opened battery cell can cause irritation, burns, and ulcerations.
- **Eye Contact:** Contents of an opened battery cell can cause eye irritation, burns, cornea damage, and blindness

## V. FIRE-FIGHTING MEASURES

- **Extinguishing Media:** Water, CO2, Dry chemical, or foam
- **Flammable Limits:** Not applicable
- **Unusual Fire & Explosion Hazards:** None

## VI. ACCIDENTAL RELEASE MEASURES

Wear acid resistant boots, face shield, chemical splash goggles and acid resistant gloves. Remove combustible materials and all sources of ignition. Stop flow of material and contain spill by diking with soda ash, etc. Carefully neutralize spill with soda ash, etc. Make certain mixture is neutral then collect residue and place in a drum or other suitable hazardous waste container. If battery is leaking, place battery in a heavy-duty plastic bag. Do not allow discharge of acid to sewer.

Acid must be managed in accordance with approved local, state, and federal requirements.

# GARMIN LEAD ACID BATTERY INFORMATION

## VII. HANDLING AND STORAGE

---

- **Storage:** Store away from reactive materials, open flames, and sources of ignition. Store batteries in cool, dry, well-ventilated areas, batteries should not be stored outdoors without suitable protection from environment.
- **Damage:** Avoid contact with acid materials. Use soda ash or lime to neutralize. Flush with water and dispose of materials as hazardous waste. Lead and its compounds and sulfuric acid pose a severe threat to the environment. Contamination of water, soil, and air should be prevented.
- **Handling:** Accidental 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 be properly protected
- **Charging:** This battery is designed for recharging. Charge battery before use. 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 and/or venting. During charging hydrogen gas may be produced and may explode if ignited. Avoid ignition sources near battery.
- **CAUTION:** Do not dispose in fire, mix with other battery types, charge above specified rate, connect improperly, or short circuit, which may result in overheating, explosion, or leakage of cell contents.

## VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

---

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:** Acid resistant gloves and protective clothing
- **Respiratory Protection:** Acid gas respirator

## IX. PHYSICAL AND CHEMICAL PROPERTIES

---

- **Appearance:** Rectangular Block
- **Odor:** (Article) none
- **pH:** (Acid). Less than 1
- **Flash point:** Not applicable unless individual components exposed
- **Flammability:** Not applicable unless individual components exposed

# GARMIN LEAD ACID BATTERY INFORMATION

## X. STABILITY AND REACTIVITY

---

Stable.

Incompatibilities:

- **Electrolyte:** Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, most metals, carbides, chlorates, nitrates, picrate, sulfur trioxide gas, strong oxidizers, and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. No further concern for mechanical impact.
- **Lead compounds:** Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen, potassium, carbides, sulfides, phosphorus, sulfur, and reducing agents.

Hazardous Decomposition Products:

- **Electrolyte:** Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide, hydrogen.
- **Lead compounds:** Temperatures above melting point are likely to produce toxic metal fume, vapor, or dust; contact with strong acid or base or nascent hydrogen may generate highly toxic arsine gas

## XI. TOXICOLOGICAL INFORMATION

---

Routes of entry:

- **Electrolyte:** Harmful by all routes of entry. Under normal conditions of use, sulfuric acid vapors and mist are not generated. Sulfuric acid vapors and mist may be generated when product is overheated, oxidized, or otherwise processed or damaged.
- **Lead compounds:** Under normal conditions of use, lead dust, vapors, and fumes are not generated. Hazardous exposure can occur only when product is heated above the melting point, oxidized or otherwise processed or damaged to create dust, vapor, or fume.
- Inhalation:
  - **Electrolyte:** Breathing of sulfuric acid vapors or mists may cause severe respiratory irritation.
  - **Lead compounds:** Inhalation of lead dust or fumes may cause irritation of upper respiratory tract and lungs.
- Ingestion:
  - **Electrolyte:** May cause severe irritation of mouth, throat, esophagus, and stomach.
  - **Lead compounds:** Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhea, and severe cramping. This may lead rapidly to systemic toxicity. Acute ingestion should be treated by physician.

# GARMIN LEAD ACID BATTERY INFORMATION

- Skin contact:
  - **Electrolyte:** Severe irritation, burns, and ulceration. Sulfuric acid is not readily absorbed through the skin and is not a dermal sensitizer.
  - **Lead compounds:** Not readily absorbed through the skin.

## XII. ECOLOGICAL INFORMATION (NON-MANDATORY)

.....

Environmental Fate: Lead is very persistent in soil and sediments. No data on environmental degradation. Mobility of metallic lead between ecological compartments is slow. Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants, but little bioaccumulation occurs through the food chain. Most studies include lead compounds and not elemental lead.

## XIII. DISPOSAL CONSIDERATIONS (NON-MANDATORY)

.....

Recycle or dispose in accordance with applicable Federal, state, and local regulations. Lead-Acid batteries are completely recyclable. Return to suitable agency for recovery.

## XIV. TRANSPORT INFORMATION (NON-MANDATORY)

.....

- **U.S. DOT:** Unregulated. Battery is classified as “non-spillable battery” per 49 CFR 173.159(d) and meets the requirements of 173.159a(d)
- **IATA / ICAO:** Unregulated. Battery is classified as “non-spillable battery” per Packing Instruction 872 and meets the requirements of Special Provision A67 and Packing Instruction 872.
- **IMDG:** Unregulated. Battery is classified as “non-spillable battery” per Special Provision 238 and meets the requirements of Special Provision 238.

Labeling:

- **For U.S. DOT:** Each battery and outer package must be labeled “NON\_SPILLABLE BATTERY” and be visible during transportation.
- **For IATA/ICAO:** Air waybill must include the statement “Not Restricted per Special Provision A67.”

# GARMIN LEAD ACID BATTERY INFORMATION



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

.....

OSHA: Considered hazardous under Hazard Communication Act (29CFR1910.1200)

**XVI. OTHER INFORMATION**

.....

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.