Battery - Containing Product Information Data Sheet

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

Garmin is providing this Data Sheet as a service to its customers for general information purposes only. The information in this Data Sheet has been provided to Garmin by the battery manufacturers, and Garmin has not independently evaluated its accuracy or completeness. This Data Sheet is not intended to be a comprehensive exposition of the properties of Lead Acid batteries. No guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein.

Section 1: Product and Company Identification

Product Name: Lead Acid battery located within above products.

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

Product Category: Article

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

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

Section 2: 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 induce 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

Section 3: 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

Section 4: 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.

Section 5: Fire-Fighting Measures

Extinguishing Media: Water, CO_2, Dry chemical or foam

Flammable Limits: Not applicable

Unusual Fire & Explosion Hazards: None

Section 6: 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.

Section 7: 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.

Section 8: 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

Section 9: 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

Section 10: 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.

Section 11: 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.

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.

Section 12: 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.

Section 13: 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.

Section 14: 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."

Section 15: Regulatory Information (non-mandatory)

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

Section 16: 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.