

GNB TECHNOLOGIES

MATERIAL SAFETY DATA SHEET

I. Product Identification

Chemical/Trade Name (Identity used on label): ABSOLYTE IIP/CHAMPION Sealed Lead Acid Battery	Chemical Family/Classification: Electric Storage Battery
Company Name GNB Battery Technologies	Address: 829 Parkview Boulevard Lombard, IL 60148-3249
Division or Department Industrial Battery Company - Stationary	
Contact	Telephone Number
Questions concerning MSDS Contact Environmental Assurance Department	Day: 770-673-2470 Steve Emmons
Transportation Emergencies: CHEMTREC	24 hours: 800-424-9300

II. Hazardous Ingredients

MATERIAL	% by Weight or Volume	CAS NUMBER	OSHA Exposure	Limits ACGIH
Lead	67-77	7439-92-1	.05 mg/m ³	.15 mg/m ³
Electrolyte: (Sulfuric Acid)	18-23	7664-93-9	1 mg/m ³	1 mg/m ³
Case Material: Polypropylene	2-5	9003-07-0	N/A	N/A
Separator	2-3	N/A	N/A	N/A
Copper	<1	7440-50-8	1 mg/m ³	N/A
Tin	<0.2	N/A	2 mg/m ³	N/A
Cadmium	0.2-0.3	7440-43-9	0.05 mg/m ³	0.05 mg/m ³
Antimony	0.2-0.4	7440-36-0	0.5 mg/m ³	0.5 mg/m ³

III. Physical Data

Materials (at normal temperatures)	Appearance and Odor Electrolyte is a clear liquid with a sharp, penetrating, pungent odor.
Electrolyte	
Boiling Point (at 760 MM Hg) 203°F	Melting Point N/A
Specific Gravity (H ₂ O=1) 1.230-1.350	Vapor Pressure (mm Hg at 20°C) 10
Vapor Density (AIR=1) Greater than 1	Solubility in Water 100%
% Volatiles by Weight N/A	Evaporation Rate (Butyl Acetate=1) Less than 1

April 13, 1999

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IV. Health Hazard Information

ROUTES AND METHODS OF ENTRY

Inhalation:

Sulfuric Acid vapors or mist may cause severe respiratory irritation. Lead dust or fumes may cause irritation of upper respiratory tract or lungs.

Skin Contact:

Sulfuric Acid may cause severe irritation, burns and ulceration. Lead Compounds are not absorbed through the skin.

Skin Absorption:

Sulfuric Acid is not readily absorbed through the skin. Lead Compounds are not absorbed through the skin.

Eye Contact:

Sulfuric Acid vapors or mist can cause severe irritation, burns, cornea damage and possible blindness. Lead Compounds may cause eye irritation.

Ingestion:

Sulfuric Acid may cause severe irritation of mouth, throat, esophagus and stomach. Lead Compounds may cause abdominal pain, nausea, vomiting, diarrhea and severe cramping. Acute ingestion should be treated by physician.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Acute Effects:

Sulfuric Acid may cause severe skin irritation, burns, damage to cornea and possible blindness and upper respiratory irritation. Lead Compounds may cause abdominal pain, nausea, headaches, vomiting, diarrhea, severe cramping and difficulty in sleeping.

Chronic Effects:

Sulfuric Acid may lead to scarring of the cornea, inflammation of the nose, throat and bronchial tubes and possible erosion of tooth enamel. Lead Compounds may cause anemia, damage to the kidneys and nervous system. May cause reproductive changes in both males and females.

POTENTIAL TO CAUSE CANCER

Lead has been tested for ability to cause cancer. The results showed that there is insufficient evidence to show that lead can or cannot cause cancer.

EMERGENCY AND FIRST AID PROCEDURES

Inhalation:

Sulfuric Acid - Remove to fresh air immediately. If breathing is difficult, give oxygen.

Lead Compounds - Remove from exposure; gargle, wash nose and eyes and consult physician.

Skin:

Sulfuric Acid - flush with large amounts of water for at least 15 minutes, remove any contaminated clothing and do not wear again until cleaned. If acid is splashed on shoes, remove and discard if they contain leather. Lead Compounds are not absorbed through the skin.

Eyes:

Sulfuric Acid - flush immediately with cool water for at least 15 minutes, then consult physician.

Lead Compounds - flush immediately with cool water for at least 15 minutes, then consult physician.

Ingestion:

Sulfuric Acid - give large quantities of water; **DO NOT** induce vomiting, then consult physician.

Lead Compounds - consult a physician.

V. Fire and Explosion Data

Flash Point: Not applicable.	Flammable Limits: Lower 4.1% (Hydrogen gas) Upper 74.1%
Extinguishing Media: CO ₂ ; foam; dry chemical.	
Special Fire Fighting Procedures: If batteries on charge, turn off power. Use positive pressure, self-contained breathing apparatus. Water applied to electrolyte generates heat and causes it to splatter. Wear acid resistant clothing.	
Unusual Fire and Explosion Hazard: Hydrogen and Oxygen gases are produced and recombined in the cells during normal battery operation or when on charge. These gases do not normally enter the air as they are sealed inside. Overcharging may cause these gases to enter the air through the safety relief valves. To avoid risk of fire or explosion, keep sparks and other sources of ignition away from the battery. Do not allow metallic material to simultaneously contact both the positive and negative terminal of batteries. Follow manufacturers' instructions for installation.	

VI. Reactivity Data

Stability: _ = Unstable n = Stable	Conditions to Avoid: Sparks and other sources of ignition. Prolonged over charge.
Incompatibility (Material to Avoid): Combination of sulfuric Acid with combustibles, and organic materials may cause fire and explosion. Also avoid strong reducing agents, most metals, carbides, chlorates, nitrates, picrate. Lead Compound: Potassium, carbides, sulfides, peroxides, phosphorus and sulfur.	
Hazardous Decomposition Products: Sulfuric Acid: Hydrogen sulfur dioxide, sulfur trioxide and sulfuric acid mist.	Hazardous Polymerization: _ = May Occur n = Will Not Occur

VII: Control Measures

Engineering Controls: Store and handle lead acid batteries in well ventilated areas.
Work Practices: Do not remove safety relief valves in top cover. Do not allow metallic materials to simultaneously contact both the positive and negative terminals of the batteries. Use the proper lifting equipment to lift the battery. Avoid contact with internal components of the batteries.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: None are required under normal conditions. If concentrations of sulfuric acid mist are known to exceed PEL, use NIOSH or MSHA approved respiratory protection.
Eyes and Face: None are required under normal conditions. If electrolyte is exposed due to damage to the cell, wear chemical splash goggles or a face shield.
Hands, Arm, Body: None are required under normal conditions. If electrolyte is exposed due to damage to the cell, wear rubber or plastic acid resistant gloves with elbow length gauntlet.
Other Special Clothing and Equipment: None under normal conditions. If electrolyte is exposed due to damage to the cell, wear an acid resistant apron.

VIII. Safe Handling Precautions

Hygiene Practices:

Wash hands thoroughly before eating, drinking or smoking after handling batteries.

Protective Measures to be taken during non-routine tasks including equipment maintenance:

Not applicable.

SPILL OR LEAK PROCEDURES

Protective measures to be taken if material is released or spilled:

Remove combustible materials and all sources of ignition. Carefully neutralize spill with soda ash, etc. Make certain mixture is neutral then collect residue and place in a drum or other suitable container with a label specifying "contains hazardous waste" or (if uncertain call distributor regarding proper labeling procedures). Dispose of as hazardous waste. If battery is leaking, place battery in a heavy duty plastic bag. Wear acid resistant boots, faceshield, chemical splash goggles and acid resistant gloves.

DO NOT RELEASE UNNEUTRALIZED ACID.

Waste Disposal Methods:

Sulfuric Acid: Neutralize as described above for a spill, collect residue and place in a container labeled as containing hazardous waste. Dispose of as a hazardous waste. If uncertain about labeling procedures, call your local battery distributor or contact listed at beginning.

DO NOT FLUSH LEAD CONTAMINATED ACID TO SEWER.

Batteries: Send to lead smelter following applicable federal, state and local regulations.

IX. Other

REGULATORY INFORMATION:

NFPA Hazard rating for Sulfuric Acid:

Flammability (Red) = 0

Health (Blue) = 3

Reactivity (Yellow) = 2

US DOT identification and description for this battery is:

Batteries, wet, non-spillable, Electric Storage

8, UN 2800, PG III, Label: Corrosive

(Exceptions 173.159, paragraph (d), C.F.R. 49)

For air shipments, reference International Air Transportation Association (IATA) Dangerous Goods Regulations Manual, refer to special provisions A-48 and A-67. For ocean shipments, reference International Maritime Dangerous Goods Regulations, Page 8121, Amendment #27-94.

This is to certify that the "Non-Spillable" batteries are capable of withstanding the Vibration and Pressure Differential Test, and at a temperature of 55°C, the electrolyte will not flow from a ruptured or cracked case. The batteries have been protected against short circuits and securely packaged. The batteries and outer packaging must be plainly marked "Non-Spillable" or "Non-Spillable Battery".

Sulfuric Acid is water reactive if concentrated. Batteries are regulated under applicable US DOT, RCRA, CERCLA and EPCRA. If you have any questions, please contact the Environmental Assurance Department of GNB Technologies at 770-673-2470.

The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mist containing sulfuric acid" as a Category 1 carcinogen, a substance that is carcinogenic to humans. This classification does not apply to liquid forms of sulfuric acid or sulfuric acid solutions contained within a battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may however result in the generation of sulfuric acid mist.

A battery is manufactured using lead, CAS No. 7439-92-1 and sulfuric acid, CAS No. 7664-93-9 which are subject to the reporting requirements of EPCRA Section 313 (40 CFR 372).