

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product: Non Spillable Lead Acid Battery - SuperSafe GFM, T, T-FT, T MJ, TM, TE & TX, DataSafe NPX & HX, Genesis NP, TD, TN & Teledata
 Recommended Use: Electric Storage Battery
 Supplier: ENERSYS AUSTRALIA PTY LTD
 46 Egerton Street
 SILVERWATER, NSW 2128
 Telephone: 02 9739 9999 (Mon - Fri 8.am - 5.pm AEST)
 Facsimile: 02 9739 9900
 Emergency: CHEMTREC +1 703 527 3887 (International 24 hours)
 02 9037 2994 (within Australia)

SECTION 2 – HAZARDS IDENTIFICATION




Classification of the Hazardous Chemical

The materials contained within the battery are classified as hazardous, according to criteria of National Occupational Health & Safety Commission, Australia (NOHSC) and in accordance with the GHS.

Hazard Category

Carcinogenicity –Category 1
 Carcinogenicity –Category 2B
 Specific Target Organ Toxicity – Category 3
 Serious Eye Damage – Category 2A
 Skin Corrosion/Irritation – Category 1B
 Acute Toxicity – Category 4

Label Elements

Label	Signal Word	Hazard Statement
 Health Hazard	Danger, Warning	H350 May cause cancer H351 Suspected of causing cancer
 Exclamation Mark	Warning	H302 Harmful if swallowed H319 Causes serious eye irritation H335 May cause respiratory irritation
 Corrosion	Danger	H314 Causes severe skin burns and eye damage

Precautionary Statements

P201 Obtain special instructions before use
 P261 Avoid breathing dust/fume/gas/mist/vapours/spray
 P270 Do not eat, drink or smoke when using this product
 P280 Wear protective gloves/eye protection/face protection
 P308 + P313 If exposed or concerned: Get medical advice/attention
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P304 + P340 IF INHALED: Remove victim to fresh air
 P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 P301+312 Call a POISON CENTER or doctor/physician if you feel unwell

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Identity of Chemical Ingredients			Air Exposure Limits (ug/m ³)		
Components	CAS Number	Approximate % by Wt. Or Vol.	OSHA	ACGIH	NIOSH
Inorganic Lead Compound:					
Lead	7439-92-1	45-60	50	150	100
* Lead Dioxide	1309-60-0	15-25	50	150	100
* Antimony	7440-36-0	2	500	500	--
* Arsenic	7440-38-2	0.2	10	200	--
* Calcium	7440-70-2	0.2	--	--	--
* Tin	7440-31-5	0.2	2000	2000	--
Electrolyte (Sulphuric Acid)	7664-93-9	10-30	1000	1000	1000
Case Material:					
Polypropylene		5-10	N/A	N/A	N/A
Polystyrene	9003-07-0				
Styrene Acrylonitrile	9003-53-6				
Acrylonitrile Butadiene Styrene	9003-54-7				
Styrene Butadiene	9003-56-9				
Polyvinylchloride	9003-55-8				
Polycarbonate, Hard Rubber, Polyethylene	9002-86-2				
	--				
Other:					
Silicon Dioxide (Gel batteries only)	7631-86-9	20-40	N/A	N/A	N/A
Sheet Molding Compound (Glass reinforced polyester)	--		N/A	N/A	N/A

Inorganic lead and electrolyte (sulphuric acid) are the primary components of every battery manufactured by EnerSys.

Other ingredients may be present dependent upon battery type. Contact your EnerSys representative for additional information

SECTION 4 – FIRST AID MEASURES

Inhalation

Sulphuric Acid: Remove to fresh air immediately. If breathing is difficult, give oxygen.

Lead: Remove from exposure, gargle, wash nose and lips; consult physician.

Ingestion

Sulphuric Acid: Give large quantities of water; do NOT induce vomiting; for advice, contact a Poisons Information Centre (phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

Lead: Consult physician immediately.

Skin

Sulphuric Acid: Flush with large amounts of water for at least 15 minutes; remove contaminated clothing completely, including shoes.

Lead: Wash immediately with soap and water.

Eyes

Sulphuric Acid and Lead: Hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre (phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor, or for at least 15 minutes.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable Extinguishing Media

CO₂; foam; dry chemical.

Specific Hazards Arising From the Chemical

Highly flammable hydrogen gas is generated during charging and operation of batteries. To avoid risk of fire or explosion, keep sparks or other sources of ignition away from batteries. Do not allow metallic materials to simultaneously contact negative and positive terminals of cells and batteries. Follow manufacturer's instructions for installation and service.

Special Protective Equipment and Precautions for Fire Fighters

If batteries are on charge, shut off power. Use positive pressure, self-contained breathing apparatus. Water applied to electrolyte generates heat and causes it to spatter. Wear acid-resistant clothing.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

Wear acid-resistant clothing, boots, gloves, and face shield.

Environmental precautions

Do not allow discharge of unneutralised acid to sewer.

Methods and Materials for Containment and Cleaning Up

Stop flow of material; contain/absorb small spills with dry sand, earth or vermiculite. Do not use combustible materials. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling

Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant. Handle batteries cautiously to avoid spills. Make certain vent caps are on securely. Avoid contact with internal components. Wear protective clothing when filling or handling batteries.

Conditions for Safe Storage, Including Any Incompatibilities

Store batteries in cool, dry, well-ventilated areas with impervious surfaces and adequate containment in the event of spills. Batteries should also be stored under roof for protection against adverse weather conditions. Separate from incompatible materials. Store and handle only in areas with adequate water supply and spill control. Avoid damage to containers. Keep away from fire, sparks and heat.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters – exposure standards, biological monitoring

In areas where sulphuric acid is handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

Appropriate engineering controls

Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid-resistant.

Personal protective equipment (PPE)

Respiratory Protection: None required under normal conditions. When concentrations of sulphuric acid mist are known to exceed the PEL, use NIOSH or MSHA-approved respiratory protection.

Protective Gloves: Rubber or plastic acid-resistant gloves with elbow-length gauntlet.

Eye Protection: Chemical goggles or face shield.

Other Protection: Acid-resistant apron. Under severe exposure emergency conditions, wear acid-resistant clothing and boots.

Emergency Flushing: In areas where sulphuric acid is handled in concentrations greater than 1%, emergency eyewash stations and showers should be provided, with unlimited water supply.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Electrolyte

Boiling Point And Boiling Range: 203 – 240 F

Evaporation Rate (Butyl Acetate = 1): Less than 1

Melting Point: N/A

Flash Point: N/A

Upper/Lower Flammability or Explosive Limits: LEL = 4.1% (Hydrogen Gas), UEL = 74.2%.

Vapour Pressure (mm Hg): 10

Vapour Density (AIR = 1): Greater than 1

Solubility in Water: 100%

Specific Gravity (H₂O = 1): 1.215 to 1.350

% Volatile by weight: N/A

Appearance and Odour: Manufactured article; no apparent odour. Electrolyte is a clear liquid with a sharp, penetrating, pungent odour.

SECTION 10 – STABILITY AND REACTIVITY

Chemical Stability: Stable

Conditions to Avoid: Prolonged overcharge; sources of ignition

Incompatible Materials and Possible Hazardous Reactions

Sulphuric Acid: Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals, sulphur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulphur dioxide fumes and may release flammable hydrogen gas.

Lead Compounds: Avoid contact with strong acids, bases, halides, halogenates, potassium nitrate, permanganate, peroxides, nascent hydrogen and reducing agents.

Hazardous Decomposition Products

Sulphuric Acid: Sulphur trioxide, carbon monoxide, sulphuric acid mist, sulphur dioxide, and hydrogen.

Lead Compounds: High temperatures likely to produce toxic metal fumes, vapour, or dust; contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on Routes of Exposure

Sulphuric Acid: Harmful by all routes of entry.

Lead Compounds: Hazardous exposure can occur only when product is heated, oxidized or otherwise processed or damaged to create dust, vapour or fume.

Symptoms Related To Exposure

Inhalation

Sulphuric Acid: Breathing of sulphuric acid vapours 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

Sulphuric Acid: May cause severe irritation of mouth, throat, oesophagus and stomach.

Lead Compounds: Acute ingestion may cause abdominal pain, nausea, vomiting, diarrhoea and severe cramping. This may lead rapidly to systemic toxicity and must be treated by a physician.

Skin Contact

Sulphuric Acid: Severe irritation, burns and ulceration.

Lead Compounds: Not absorbed through the skin.

Eye Contact

Sulphuric Acid: Severe irritation, burns, cornea damage, and blindness.

Lead Components: May cause eye irritation.

Acute Toxicity

Sulphuric Acid: Severe skin irritation, damage to cornea, upper respiratory irritation.

Lead Compounds: Symptoms of toxicity include headache, fatigue, abdominal pain, loss of appetite, muscular aches and weakness, sleep disturbances and irritability.

Chronic Toxicity

Sulphuric Acid: Possible erosion of tooth enamel, inflammation of nose, throat and bronchial tubes.

Lead Compounds: Anaemia; neuropathy, particularly of the motor nerves, with wrist drop; kidney damage; reproductive changes in males and females.

Carcinogenicity

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

Lead Compounds: Lead is listed as a 2B carcinogen, likely in animals at extreme doses. Proof of carcinogenicity in humans is lacking at present.

Arsenic: Listed by National Toxicology Program (NTP), International Agency for Research on Cancer (IARC), OSHA and NIOSH as a carcinogen only after prolonged exposure at high levels.

Medical Conditions Generally Aggravated by Exposure

Overexposure to sulphuric acid mist may cause lung damage and aggravate pulmonary conditions. Contact of sulphuric acid with skin may aggravate diseases such as eczema and contact dermatitis. Lead and its compounds can aggravate some forms of kidney, liver and neurologic diseases.

SECTION 12 – ECOLOGICAL INFORMATION

Eco toxicity: No ecological data are available for this material

Persistence and Degradability: Not available

Bio accumulative Potential: Not available

Mobility in Soil: Not available

Other Adverse Effects: Do not discharge this material into waterways, drains and sewers.

SECTION 13 – DISPOSAL CONSIDERATIONS

Safe Handling and Disposal Methods

Spent batteries: Send to secondary lead smelter for recycling. All cells must be discharged prior to disposal. Any battery terminals should be insulated or capped to prevent a short circuit. Do not incinerate.

Disposal of Any Contaminated Packaging

Place neutralised slurry into sealed containers and handle as applicable with state and federal regulations. Large water-diluted spills, after neutralization and testing, should be managed in accordance with approved local, state and federal requirements. Consult state environmental agency and/or federal EPA.

SECTION 14 – TRANSPORT INFORMATION

ROAD AND RAIL TRANSPORT

The transportation of non-spillable batteries within Australia is regulated by the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG). Not classified as Dangerous Goods by the criteria of the transport by Road and Rail under Special Provisions 238. The shipping information within Australia is as follows:

UN Number: 2800

Proper Shipping Name: Batteries, wet, NON-SPILLABLE, electric storage

Transport Hazard Class(es): 8

Packing Group: -

Special Precautions During Transport: 238

Hazchem Code: 2R

Packing Instructions: P003

Special packing provisions: PP16 For UN 2800:

(a) batteries must be protected from short circuit within the packagings; and

(b) when transported only by road or rail within Australia, it is permissible to dispense with outer packagings.

AIR TRANSPORT

IATA

Excepted from the dangerous goods regulations because the batteries meet the requirements of Packing Instruction 872 and Special Provisions A67 of the International Air Transportation Association (IATA) Dangerous goods Regulations and International Civil Aviation Organization (ICAO) Technical Instructions. Battery Terminals must be protected against short circuits.

The words "NOT RESTRICTED", SPECIAL PROVISION A67" must be provided on an airway bill when air waybill is issued.

MARINE TRANSPORT

IMDG

Excepted from the dangerous goods regulations for transport by sea because the batteries meet the requirements of Special Provision 238 of the International Maritime Dangerous Goods (IMDG CODE). Battery terminals must be protected against short circuits.

SECTION 15 – REGULATORY INFORMATION

Safety, Health and Environmental Regulations Specific for: Sulphuric Acid

Classified as hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.

Classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).

Poisons Schedule Number: S6

SECTION 16 – OTHER INFORMATION

The information above is believed to be accurate and represents the best information currently available to us.

EnerSys Australia makes no warranty or merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes.

Although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. This safety data sheet (SDS) provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

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