



MATERIAL SAFETY DATA SHEET

Sealed Lead Acid Batteries (SLA)

Section 1 : Product and Manufacturer Identity

Product Identity:

Sealed Lead - Acid Battery

Brand : *SINERGY*

European Distributor

PROJECT ITALIA SRL
Via Soastene 12 ZI
36040 BRENDOLO VICENZA
Ph. ++39 0444 401557
Fx ++39 0444 405334

Section 2 : Hazardous Ingredients / Identity Information

<u>Components</u>	<u>CAS</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>% (By Wt)</u>
Lead	7439-92-1	0.05mg/m ³	0.15mg/m ³	45 - 60%
Lead Dioxide	1309-60-0	0.05mg/m ³	0.15mg/m ³	15 - 25%
Sulfuric Acid Electrolyte	7664-93-9	1.00mg/m ³	1.00mg/m ³	15 - 20%
Non-Hazardous Material	N/A	N/A	N/A	5 - 10%

Section 3 : Physical /Chemical Characteristics

<u>Boiling Point:</u>	Electrolyte 110° C - 112° C
<u>Vapor Pressure:</u>	Electrolyte 11.7 mmHg. At 20° C
<u>Vapor Density (AIR = 1)</u>	Electrolyte 3.4
<u>Solubility in Water:</u>	Lead and Lead Dioxide are insoluble in water. Sulfuric Acid is 100% soluble in water.
<u>Appearance and Odor:</u>	Manufactured article consisting of an opaque plastic case; no apparent odor. Sulfuric Acid is a liquid.
<u>Specific Gravity (H2O=1):</u>	Electrolyte 1.270 - 1.330



MATERIAL SAFETY DATA SHEET

Sealed Lead Acid Batteries (SLA)

Section 4: Fire and Explosion Hazard Data

- Flash point:** Not Applicable
- Flammable Limits:** Lower limit 4.10% (Hydrogen gas) Upper limit 74.20%
- Extinguishing Media:** Dry chemical, CO², or water spray

Special Fire Fighting Procedures: If batteries are on charge, turn off power. Use positive pressure, self-contained breathing apparatus in fighting fire. Water applied to electrolyte generates heat and causes it to spatter. Wear acid resistant clothing. Ventilate area well.

Unusual Fire and Explosion Hazards: Hydrogen gas may be produced and may explode if ignited. Remove all sources of ignition.

Section 5 : Reactivity Data

- Stability:** Stable under normal conditions
- Conditions to Avoid:** Avoid shorting. Avoid prolonged over-charging. Use only approved charging methods. Do not charge in gas tight containers.

Section 6 : Health Hazard Data

Health Hazard Information (Acute and Chronic) - Sulfuric acid only
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 form of sulfuric acid or sulfuric acid solutions contained within the battery. Inorganic acid mist (sulfuric acid mist) is not generated under normal use of this product. Misuse of the product, such as overcharging, may result in the generation of sulfuric acid mist.

- Routes of Entry:** By inhalation (mist), skin and eyes. Ingestion.
- Acute:** Tissue destruction on contact. May cause 2nd and 3rd degree burns or blindness. Ingestion will cause corrosive burns on contact. May be fatal if swallowed.
- Chronic:** Inhalation of mist may cause upper respiratory irritation.
- Signs and Symptoms:** Irritation and burning of exposed tissues.
- Medical Conditions:** Respiratory disorders may be aggravated by prolonged inhalation of mists.



MATERIAL SAFETY DATA SHEET

Sealed Lead Acid Batteries (SLA)

Emergency and First Aid Procedures:

Battery Electrolyte:

Inhalation:

Remove to fresh air. Give oxygen or artificial respiration if needed. Get immediate medical attention.

Eye Contact:

Flush with plenty of water for at least 15 minutes. Get immediate medical attention.

Skin Contact:

Remove contaminated clothing and flush affected areas with plenty of water for at least 15 minutes.

Ingestion:

Do not induce vomiting. Dilute by giving large quantities of water. If available give several glass of milk. Do not give anything by mouth to an unconscious person. Give CPR if breathing has stopped. Get immediate medical attention.

Section 7 : Precaution for Safe Handling and Use

Steps to be Taken in Case of Broken Battery Case or Electrolyte Leakage:

Avoid contact with acid materials. Use soda ash or lime to neutralize. Flush with water. Dispose of clean - up materials as a hazardous waste.

Waste Disposal Method:

Dispose of accordance with Federal, State and Local Regulations. Do not incinerate. Batteries should be shipped to a reclamation facility for recovery of the metal and plastic components as the proper method of waste management. Contact distributors for appropriate product return procedures.

Precaution to be Taken in Handling and Storage:

Store in cool, dry area away from combustible materials. Do not store in sealed, unventilated areas. Avoid overheating and overcharging.

Other Precaution:

Do not charge in unventilated areas. Do not use organic solvents or other than recommended chemical cleaners on battery.

Section 8 : Control Measures

General:

Normal room ventilation is sufficient during normal use and handling.

Personal Protective Equipment (in the Event of Battery Case Breakage) :

Always wear safety glasses with side shields or full-face shield.

Use rubber or neoprene glove.

Wear acid resistant boots, apron or clothing.



MATERIAL SAFETY DATA SHEET

Sealed Lead Acid Batteries (SLA)

Work / Hygienic Practices:

Remove jewelry, rings, watch and any other metallic objects while working on batteries. All tools should be adequately insulated to avoid the possibility of shorting connections. Do not lay tools on top of battery. Be sure to discharge static electricity from tools and individual person by touching a grounded surface in the vicinity of the batteries, but away from cells. Batteries are heavy. Serious injury can result from improper lifting or installation. Do not lift, carry, install or remove cells by lifting or pulling the terminal posts for safety reasons and because terminal posts and post seals may be damaged. Do not wear nylon clothes or overalls as they can create static electricity. Do keep a fire extinguisher and emergency communications device in the work area.

Section 9 : Other Regulatory Information

1. NEPA Hazard Rating for Sulfuric Acid:

Flammability (Red) = 0 Health (Blue) = 3 Reactivity (Yellow) = 2

2. Transportation Information :

Proper Shipping Name	Batteries - Wet, Non-Spillable, Electric Storage
U.S. DOT (U.S. Department of Transportation)	Unregulated, meets the requirement of 69 CFR 173.159(d)
IATA (International Air Transportation Association) ICAO (International Civil Aviation Administration)	Unregulated, meets the requirements of Special Provisions A67
IMO (International Marine Dangerous Goods)	Unregulated

Comment:

Sealed lead acid batteries are classified as “non-spillable” for the purpose of transportation by DOT, and IATA/ICAO as result of passing the Vibration and Pressure Differential Test described in DOT (49 CFR 173.159(d) and IATA /IACAO (Special Provision A67).

Sealed lead acid batteries can be safely transported on deck, or under deck stored on either a passenger or cargo vessel as result of passing the Vibration and Pressure Differential Tests as described in the IMDG regulations.

To transport these batteries as “non-spillable” they must be shipped in a condition that would protect them from short-circuits and be securely packaged so as to withstand conditions normal to transportation by a consumer, in or out of a device, they are unregulated thus requiring no additional special handling or packaging.

For all modes of transportations, each battery and outer package is labeled “NON-SPILLABLE” per 49 CFR 173.159 (d). If you repackage our batteries either as batteries or as a component of another product you must label the outer package “ NON-SPILLABLE “ per 49 CFR 173.159 (d).