DYNAMIS Batterien

Material Safety Data Sheet

Total : 5 Pages

Section I : Product and Manufacturer Identity

Product Identity :

Sealed lead acid battery
"DYNAMIS LEAD-LINE"

Manufacturer's Name and Address :

DYNAMIS Batterien GmbH
Brühl 15 78465
Dettingen/Konstanz-Germany

Telephone :

Emergency Telephone Number :
+49-7533-93669-0
Customer Service Telephone Number :
+49-7533-93669-0
Web-site : www.dynamis-batterien.de

Section II : Hazardous Ingredients / Identity Information

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

(The non-hazardous materials include ABS plastic ,glass fiber ,rubber ,copper, benjamin)

Section III : Physical / Chemical Characteristics - Electrolyte

Boiling Point :	110□ ~ 112□
Vapor Pressure :	11.7 mm Hg. at 20□
Vapor Density (AIR = 1) :	Electrolyte 3.4
Specific Gravity (H2O = 1) :	1.270 ~ 1.330
Solubility in Water :	Lead and Lead Dioxide are insoluble in water. Sulfuric Acid is 100% soluble in water.
Appearance and Odor :	Manufactured article consisting of an opaque plastic case; no apparent odor. Sulfuric acid is a liquid.

Section IV : Fire and Explosion Hazard Data

Flash Point :	Not Applicable
Flammable Limits :	Lower limit 4.10% (Hydrogen gas in air) 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 V : 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 VI : Health Hazard Data

Do not open battery. Avoid contact with internal components. Internal components include lead and sulfuric acid.

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 forms 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 mists 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

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 VII : Precautions for Safe Handling and Use

Handling :

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 in 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.

Precautions to be Taken in Handling and Storage :

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

Other Precautions :

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

Section VIII : 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.

Work / Hygienic Practices :

Remove jewelry, rings, watcher 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 IX : Other Regulatory Information

NEPA Hazard Rating for Sulfuric Acid :

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

Transportation Information

Identification and Proper Shipping Name :

Batteries vonform in the classification as “Batteries, Wet, Non-Spillable, Electric Storage”

U.S. DOT :

Batteries meet the requirements of 49 CFR 173.159(d). They do not have an assigned UN number nor do they require additional DOT hazard labeling.

IATA / ICAO :

Batteries meet the requirements of Special Provision A67. They are exempt from hazardous goods regulations, and classified as a “non-spillable battery”.

For all modes of transportation, each battery and outer package must be labeled :

"Non-Spillable" or "Non-Spillable Battery". This label must be visible during transportation.

IMDG:

The international transportation of wet and moist charged (moist active) batteries is regulated by the International Maritime Dangerous Goods code (IMDG) .Some DYNAMIS batteries have been tested and meet the non-spillable criteria listed in the IMDG code page 8121.These batteries are excepted from all IMDG code provided that the batteries terminal are protected against short circuits.

California Proposition 65 :

The State of California has determined that certain battery terminals contain lead and lead compounds, chemicals known to the State of California to cause cancer, birth defects and other reproductive harm. **IMPORTANT: WASH HANDS THOROUGHLY AFTER WORKING WITH BATTERIES AND BEFORE EATING, DRINKING OR SMOKING.**

Section X : Additional Information

The Material Safety Data Sheet is supplied for informational purposes only. The information and recommendations contained herein have been compiled from sources believed to be reliable and represent current opinion on the subject. No warranty, guarantee, or representation is made by DYNAMIS Batterien GmbH as to the absolute correctness or sufficiency of any representation contained herein and DYNAMIS Batterien GmbH assumes no responsibility in connection therewith, nor can it be assumed that all acceptable safety measures are contained herein, or that additional measures may not be required under particular or exceptional conditions or circumstances.