Sparco DS Global LLP

LEAD ACID BATTERIES, INDUSTRIAL WET

MATERIAL SAFETY DATA SHEET

SECTION :1 PRODUCT IDENTIFICATION

Chemical/ Trade Name	:	Lead Acid Battery
Chemical Family/ Classification	:	Electric Storage Battery :
Manufacture's Name	:	Sparco Batteries Pvt. Ltd.
Address	:	Kila no.-22, Khasra no. 23/1/2, 23/2/1, Vill- Nathupur, Sonipat-131029, India.
Person Responsible for Preparation	:	Mr. Pramod Kumar
For Emergency	:	Mr. Arvind Tuli
Other Information Calls	:	+91-9891-702006 (Pramod Kumar)
MSDS Issued Date	:	March 30th 2018
MSDS Revised Date	:	NA. First Version
MSDS Revision No.	:	0

SECTION :2 HAZARDOUS INGREDIENTS / IDENTITY INFORMATION

Principal Components (Chemical & Common Name)		C.A.S. #	% By Weight	Air Exposure Limits (g/m^3)		
Inorganic compounds of				OSHA	ACGIH	NIOSH
	Lead	7439-92-1	55-65	50	150	100
	Antimony	7440-36-0	2.0 max	500	500	------
	Tin	7440-31-5	0.1 max	10	200	------
Sulphuric Acid (Electrolyte)		7464-93-9	20-25	1000	1000	1000
Poly Propylene (Battery Case)		9003-07-0	6-8	NA	NA	NA
Poly Ethylene (Separator)		9002-88-4	1-2	NA	NA	NA

Note: Inorganic lead and Electrolyte (Sulphuric Acid) are the primary components of battery manufactured by Sparco Batteries Pvt. Ltd. Other ingredients may be present depending upon battery type. Poly Propylene is the principal case material of all our Batteries. Contact your Sparco Batteries Pvt. Ltd's representative for additional information.

SECTION: 3 PHYSICAL AND CHEMICAL PROPERTIES

Properties	Finished Battery	Lead	Sulphuric Acid
Appearance	**Solid Object**	**Bluish Gray Heavy metal**	**Clear Liquid**
Oder	**NA**	**Odorless**	**Slightly Acid**
Sp. Gravity gm/cc (H_2O-1.00)	**NA**	**11.34**	**1.215 - 1.250**
Melting Point	**NA**	**327°C**	**NA**
Boiling Point	**NA**	**1740°C**	**290°C**
Solubility	**NA**	**Insoluble in water**	**100% miscible in water, liberates heat**
Vapour Density (Air - 1)	**NA**	**NA**	**>1**
Vapour Pressure (mm Hg) @ 20°C	**NA**	**NA**	**11-17**
Evaporation rate (Butyl acetate=1)	**NA**	**NA**	**NA**
% Volatile by weight	**NA**	**NA**	**NA**

SECTION: 4 STABILITY & REACTIVITY

Stability : Stable

Conditions to Avoid : Avoid Prolonged Overcharging & sources of ignitions.
Use only approved charging Methods.
Do not puncture battery case.

Materials to Avoid (Incompatibility)

Sulphuric acid : Contact with combustibles and organic materials may cause fire & explosion. Also reacts violently with reducing agents, metals SO_3 gas, strong oxidizers and water contact with metals may produce toxic SO_3 fumes and may release flammable hydrogen gas.

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

Hazardous Decomposition Products

Sulphuric Acid : Sulphuric trioxide, carbon monoxide, sulphuric acid must. Sulphur dioxide and hydrogen sulphide.

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

Hazardous Polymerization : Will not occur.

SECTION: 5 HEALTH HAZARD INFORMATION

Under normal conditions of battery use, internal components will not present a health hazard. The following information is provided for battery electrolyte (sulphuric acid) and lead for exposure that may occur during battery production or container breakage or under extreme heat conditions such as fire.

Routes of Entry:

- Inhalation : Yes
- Ingestion : Yes
- Eye contact : Yes
- Skin Contact : Yes

Signs and Symptoms of Exposure

Acute Hazard

- Lead:

  Direct skin or eye contact may cause local irritation.
  Inhalation or ingestion of lead dust or fumes may result in head ache, Vomiting, fatigue, sleep disturbance, weight loose, anemia and leg arm and joint pain.

- Sulphuric Acid:

  H_2SO_4 is corrosive and contact may cause skin irritation and burns.

Chronic Health Effects

- Lead:

  Prolonged exposure may cause central nervous system damage, gastro intestinal disturbances, anemia, wrist drop and kidney disinfection. Battery posts. Terminals and other related accessories containing lead and lead compound may cause cancer and reproductive harm. Wash hands after handling lead components.

- Sulphuric Acid:

  Repeated contact with H_2SO_4 cause skin burns, erosion of teeth , irritation or inflammation of nose, throat and lungs.

SECTION :6 EMERGENCY AND FIRST AID PROCEDURES

Emergency & First Aid Procedures :

- **Inhalation:**
  Not expected for product under normal conditions of use, However acid vapours can be released due to overcharging or abuse of battery. In such cases move exposed person to fresh air if he finds inconvenient or becomes fatigue. If needed oxygen may be administered. Seek medical attention.
- **Eyes**
  Immediately flush with water for at least 15 minutes. If irritation develops, seek prompt medical attention.
- **Skin**
  Flush the contacted area with large amount of water and mild soap. If irritation develops, seek medical attention.
- **Ingestion**
  Do not include vomiting. If conscious drink large amount of water/milk. Obtain medical attention.

NOTE: Never give anything by mouth to an unconscious person.

SECTION :7 FIRE AND EXPLOSION HAZARD DATA

Flash Point	:	Not Applicable
Flammable Limits	:	LEL = 4.1% (Hydrogen gas in air); UEL= 74.2%
Extinguishing Media	:	Multi Purpose Dry Chemical Powder or CO2
Fire fighting Procedure	:	Extinguish fire with the agent suitable for surrounding combustible materials. Use Self-contained breathing apparatus to prevent possible inhalation of acid mists, smokes and decomposed products due to fire. Cool the exterior of the battery's to prevent rupture.
Unusual Fire and Explosion Hazard	:	Sulphuric Acid vapors are generated upon overcharge and Polypropylene case may burst in such cases. Hydrogen gas may be produced during overcharge and may explode if igniting. Avoid open flames/sparks/other sources of ignition near battery and provide good ventilation to prevent the above two incidents.

SECTION : 8 CONTROL MEASURES

Engineering Controls	:	Store and handle in well-ventilated area. If mechanical ventilation is used, components must be acid resistant.
Work Practices	:	Handle batteries cautiously to avoid spills, Make sure that vent caps are made tight. Avoid contacts with internal components.
Personal Precautions	:	Acid Resistant aprons, boots and protective clothing, rubber or plastic acid resistant gloves with elbow length gauntlet. ANSI approved safety glasses with side shields face shield recommended.
Environmental Precautions	:	Lead and its compounds can pose a serve threat to the environment. Contamination of water, soil and air should be prevented.
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 PRECAUTIONS FOR SAFE HANDLING AND STORAGE

Spill or Leak procedures	:	• Stop flow of material, if possible carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate or lime. • Dispose of contaminated material in accordance with applicable local, state and federal regulations. • Do not release un-neutralized acid.
Handling	:	• Do not carry batteries by terminal. • Do not drop battery, attempt to open or puncture battery case. • Avoid flames and sparks nearby during and immediately after charging of battery.
Storage	:	• Store batteries in cool, dry well-ventilated areas. • Batteries should be stored under roof for protection against adverse weather conditions.
Hygiene	:	• Wash hands thoroughly before eating or drinking after handling batteries. • Work clothes and equipment should remain in designated lead contaminated areas, and never taken home or laundered with personal clothing.

SECTION : 10 TOXICOLOGICAL INFORMATION

General	:	The primary routes and exposure to lead are ingestion or inhalation of lead dust and fumes. But this is not applicable for finished product under normal conditions of use.
Acute	:	Exposure to lead and its compounds may cause Head Ache, Vomiting, Fatigue, Sleep Disturbances, Weight Loss, Kidney Damage, Anemia and Pain in Legs, Arms and Joints.
Chronic	:	Exposure to lead and its compounds may cause Central Nervous System damage, Gastrointestinal disturbances, Anemia, Wrist drop etc.

SECTION : 11 DISPOSAL CONSIDERATIONS

- Lead Acid batteries are completely recyclable. Return the whole scrap battery(s) to the distributor, manufacturer or authorized lead smelter for recycling.
- For neutralized spills, place the residue in an acid resistant container with sorbent material like sand and dispose off in accordance with local, state and federal regulations for acid and lead compounds.
- Contact local and / or state environmental officials for a clear disposal information.

SECTION : 12 TRANSPORT INFORMATION

IMDG Proper Shipping Name	:	Batteries, Wet, Filled with Acid
IMDG UN Class	:	8
IMDG UN Identification	:	UN 2794
IMDG Label	:	None Record
IMDG Packing Group	:	III
IATA Proper Shipping Name	:	Batteries, Wet, Filled with Acid
IATA UN Class	:	8
IATA UN Identification	:	UN 2794
IATA Label	:	Corrosive

SECTION : 13 REGULATORY INFORMATION

Hazardous under Hazard Communication Standards	:	Lead	:	Yes
		Sulphuric Acid	:	Yes

For Hazard Category & Exposure Limits, refer Secton - 2

SECTION : 14 OTHER INFORMATION

The information and recommendations contained herein have been compiled from sources believed to be reliable and to represent current knowledge on the subject Sparco Batteries Pvt. Ltd. Its subsidiaries or affiliates assume no responsibility in connection therewith, nor can be assumed that all acceptable safety measures are contained herein, or that other additional measures may not be required under particular or exceptional conditions or circumstances.