MATERIAL SAFETY DATA SHEET

FLOODED LEAD-ACID GOLF BATTERY
FLOODED AND WET CHARGED

SECTION 1: PRODUCT IDENTIFICATION

Product Name:	Flooded Lead-acid Batteries: DT106, DT126, DT1275, DT146, DT896, DTJ305, DTL16H
Common Synonyms:	Wet charged battery.
DOT Description:	Wet Battery, Filled with acid.
Chemical Family:	Electrical Battery Started.
Manufacturer's Name:	ANHUI LEOCH POWER SUPPLY CORP.
Address:	ECONOMIC DEVELOPMENT ZONE, SUIXI TOWN, HUAIBEI CITY, ANHUI PROVINCE, CHINA.
Contact:	(CHINA) Phone: 086-755-8603-6060 Fax: 086-755-2606-7269 (US)Phone: 001-949-588-5853 Fax: 001-949-588-5966
Emergency Number:	CHEMTREC (US, Canada & Mexico) Phone: 1-800-424-9300 CHEMTREC (International) Phone: 1-703-527-3887
Date Issued:	Jan 01, 2025

SECTION 2: Hazards identification

Causes severe skin burns and serious eye damage.
May damage fertility or the unborn child if ingested or inhaled.
May cause cancer if ingested or inhaled.
Causes damage to central nervous system, blood and kidneys through prolonged or repeated exposure.
May form explosive air/gas mixture during charging.
Extremely flammable gas (hydrogen).
Explosive, fire, blast, or projection hazard.
May cause harm to breast-fed children.
Harmful if swallowed, inhaled, or contact with skin.
Causes skin irritation, serious eye damage.

Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing, eye protection/face protection.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Contact with internal components may cause irritation or severe burns.
Avoid contact with internal acid.Irritating to eyes, respiratory system, and skin.

SECTION 3: HAZARDOUS INGREDIENTS/ IDENTITY INFORMATION

COMPONENTS	Approx % by Wt.	CAS Number	Air Exposure Limits (μg/m$^{3)}$			LD50 ORAL (Rat) (mg/kg)
			ACGIH TLV-TWA	OSHA PEL-TWA	NIOSH REL	
Inorganic Lead/Lead Compounds	65-75	7439-92-1	50	50	50	500
Tin	0.1-0.2	7440-31-5	2000	2000	2000	--
Antimony	1-2	7440-36-0	500	500	--	7000
Arsenic	<0.1	7440-38-2	10	10		763
Dilute Sulfuric Acid	20-25	7664-93-9	200	1000	1000	2140
Case Material: Polypropylene (PP)	~5	9003-07-0	--	--	--	--

SECTION 4: FIRST-AID MEASURES

Battery is considered as sealed non-spillable one. Under normal operating conditions, the materials sealed inside should not be hazardous to people's health. Only when these materials exposed during production or under case broken condition or being extremely heated (fired), they may be hazardous to people's health.

Routes of Entry:
Sulfuric 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, vapor or fume.

Inhalation:
Sulfuric Acid: Breathing sulfuric acid vapors and mists may cause severe respiratory problems.
Lead Compounds: Dust or fumes may cause irritation of upper respiratory tract or lungs.

Skin Contact:
Sulfuric Acid: Severe irritation, burns and ulceration.
Lead Compounds: Not absorbed through the skin.

Eye Contact:
Sulfuric acid: Severe irritation, burns, cornea damage, blindness.
Lead Compounds: Dust, vapor or fume may cause irritation.

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

Acute Health Hazards:
Sulfuric Acid: Severe skin irritation, burns, damage to cornea may cause blindness, upper respiratory irritation.
Lead Compounds: May cause abdominal pain, nausea, headaches, vomiting, loss of appetite, severe cramping, muscular aches

SECTION 5: FLAMMABILITY DATA

COMPONENTS	FLASHPOINT	EXPLOSIVE LIMITS	COMMENTS
Lead	None	None	None
Sulfuric Acid	None	None	None
Hydrogen	--	LEL=4.1% UEL=75%	Sealed batteries can emit hydrogen only if over charged (float voltage> 2.67 VPC). The gas enters the air through the vent caps. To avoid the chance of a fire or explosion, keep sparks and other sources of ignition away from the battery. Extinguishing Media: Dry chemical, foam, CO2.
Polypropylene (PP)	None	None	Temperatures over 380 ℃ (716 ℉) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Chronic Health Hazards:
Sulfuric acid: Possible scarring of the cornea, inflammation of the nose, throat and bronchial tubes, possible erosion of tooth enamel.
Lead Compounds: May cause anemia, damage to kidneys and nervous system, and damage to reproductive system in both males and females.

Medical Conditions Generally Aggravated by Exposure
Inorganic lead and its compounds can aggravate chronic forms of kidney, liver, and neurological diseases. Contact of battery electrolyte (acid) with the skin may aggravate skin diseases such as eczema and contact dermatitis. Overexposure to sulfuric acid mist may case lung damage and aggravate pulmonary conditions.

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 lips, consult physician

Ingestion

Sulfuric Acid: Do not induce vomiting, consult a physician immediately.

Lead Compounds: Consult a physician immediately

Eyes

Sulfuric Acid: Flush immediately with water for 15 minutes, consult a physician.

Lead Compounds: Flush immediately with water for 15 minutes, consult a physician

Skin

Sulfuric Acid: Flush with large amounts of water for at least 15 minutes, remove any contaminated clothing. If irritation develops seek medical attention.

Lead Compounds: Wash with soap and water.

SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

Spill or Leak Procedures

In case the release occurs, stop flow of material: contain/absorb small spills with dry sand, earth, and vermiculite. If possible, carefully neutralize spilled electrolyte with soda ash, sodium bicarbonate, lime, etc. Wear acid-resistant clothing, boots, gloves, and face shield. Do not allow discharge of unneutralized acid to sewer.

Waste Disposal Method

Spent Batteries - send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable. A copy of this MSDS must be supplied to any scrap dealer or secondary lead smelter with the battery. Or, consult state environment agency and/ or federal EPA.

Handling and Storing

Store batteries in a cool, dry, well ventilated area that are separated from incompatible materials and any activities which may generate flames, sparks, or heat. Keep away from all metallic articles that could contact the negative and positive terminals on a battery and create a short circuit condition. Battery should be stored under roof for protection against adverse weather conditions. Store and handle only in areas wit adequate water supply and spill control. Avoid damage to battery case.

Electrical Safety

Due to the battery's low internal resistance and high power density, high levels of short circuit current can be developed across the battery terminals. Do not rest tools or cables on the battery. Use insulated tools only. Follow all installation instructions and diagrams when installing or maintaining battery systems.

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 damaging the case. Avoid contact with internal components. Do not allow metallic articles to contact the battery terminals during handling.

Respiratory Protection:

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

Personal Protection and Equipment: None needed under normal conditions. If battery case is damaged,

- Protective gloves: use rubber or plastic acid-resistant gloves with elbow-length gauntlet.
- Eye protection: use chemical goggles or face shield.
- Other protection: Acid-resistant apron. Under severe exposure or emergency conditions, wear acid –resistant clothing and boots.
- In areas where sulfuric 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

COMPONENTS	DENSITY g/cm^3	MELTING/BOILING (M/B) POINT	SOLUBILITY (H2O)	ODOR	APPEARANCE
Lead	11.34	327.46 ℃, 621.43 ℉ (M)	None	None	Sliver-Gray Metal
Lead Sulfate	6.20	1170 ℃, 2138 ℉ (B)	40 mg/l (15 ℃, 59 ℉)	None	White crystals or powder
Lead Dioxide	9.40	290 ℃, 554 ℉ (M)	None	None	Dark brown Powder
Sulfuric Acid	~1.28	95 ℃ -115 ℃ , 203 ℉ - 240 ℉ (B)	100%	Sharp, penetrating, pungent odor	Clear Colorless Liquid
Case Material: Polypropylene (PP)	0.90-0.91	165 ℃ -170 ℃(M)	None	None	Solid

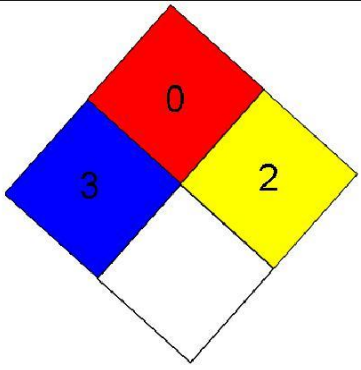
SECTION 10:Stability and Reactivity

A. Not applicable under normal conditions.

B. Incase of damage resulting in breakage of the battery container, see section10, personal protection and equipment.

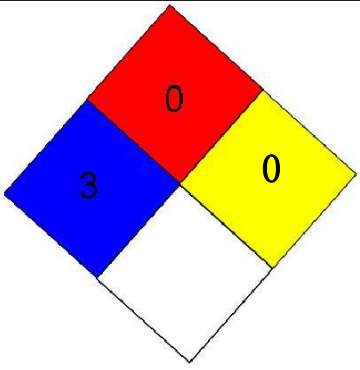
NFPA Hazard Rating for Sulfuric acid

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



NFPA Hazard Rating for Lead

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



SECTION 11:Toxicological Information

Carcinogenicity

Sulfuric Acid: The National Toxicological Program (NTP) and The International Agency for Research on Cancer (IARC) have classified strong inorganic acid mist containing sulfuric acid as a Category 1 carcinogen, a substance that is carcinogenic to humans. The ACGIH has classified strong inorganic acid mist containing sulfuric acid as an A2 carcinogen (suspected human carcinogen). These classifications do 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 result in the generation of sulfuric acid mist.

Lead Compounds: Human studies are inconclusive regarding lead exposure and an increased cancer risk. The EPA and the International Agency for Research on Cancer (IARC) have categorized lead and inorganic lead compounds as a B2 classification (probable/possible human carcinogen) based on sufficient animal evidence and inadequate human evidence.

SECTION 12: ECOLOGICAL INFORMATION

Lead and its compounds can pose a threat if released to the environment. See Waste Disposal Method in Section 8.

SECTION 13: Disposal Considerations

Waste Disposal Method

Spent Batteries - send to secondary lead smelter for recycling. Follow applicable federal, state and local regulations Neutralize as in preceding step. Collect neutralized material in sealed container and handle as hazardous waste as applicable. A copy of this MSDS must be supplied to any scrap dealer or secondary lead smelter with the battery. Or, consult state environment agency and/ or federal EPA.

SECTION 14: TRANSPORTATION REGULATIONS

GROUND-US DOT/CAN-TDG/EU-ADR/APEC-ADR:

Proper Shipping Name： Battery, Wet, Filled with acid, electric storage
Hazard Class/Division：8
ID Number： UN2794
Packing Group：II
Label Required：Corrosive

AIRCRAFT-ICAO-IATA:

Proper Shipping Name： Battery, Wet, Filled with acid, electric storage
Hazard Class/Division：8
ID Number： UN2794
Packing Group：II
Label Required：Corrosive

VESSEL-IMO-IMDG:

Proper Shipping Name： Battery, Wet, Filled with acid, electric storage
Regulation Page Number: 8120
Hazard Class/Division：8
ID Number： UN2794
Packing Group：II
Label Required：Corrosive

SECTION 15: Regulatory Information

RCRA

Spent lead acid batteries are not regulated as hazardous waste by the EPA when recycled, however state and international regulations may vary. Spilled sulfuric acid is a characteristic hazardous waste; EPA hazardous waste number D002 (corrosive).

CERCLA (superfund) and EPCRA

(a) Reportable Quantity (RQ) for spilled 100% sulfuric acid under CERCLA (superfund) and EPCRA (Emergency Planning Community Right to Know Act is 1,000lbs. State and local reportable quantities for spilled sulfuric acid may vary.

(b) Sulfuric acid is a listed “Extremely Hazardous Substance” under EPCRA with a Threshold Planning Quantity (TPQ) of 1,000lbs.

(c) EPCRA Section 302 Notification is required if 1,000lbs. or more of sulfuric acid is present at one site. The quantity of sulfuric acid will vary by battery type. Contact **ANHUI LEOCH POWER SUPPLY CORP.** for additional information.

(d) EPCRA Section 312 Tier 2 reporting is required for batteries if sulfuric acid is present in quantities of 500lbs. or more and/or lead is present in quantities of 10,00lbs. or more.

(e) Supplier Notification: This product contains toxic chemicals which may be reportable under EPCRA Section 313 Toxic Chemical Release Inventory (Form R) requirements. If you are a manufacturing facility under SIC codes 20 through 39 the following information is provided to enable you to complete the required reports:

Toxic Chemical	CAS Number	Approximate% by weight
Lead	7439-92-1	65-75
Sulfuric Acid	7664-93-9	20-25
Antimony (Sb)	7440-36-0	1-2
Arsenic (As)	7440-38-2	<0.1

If you distribute this product to other manufacturers in SIC codes 20 through 39, this information must be provided with the first shipment in a calendar year. The Section 313 supplier notification requirement does not apply to batteries which are "consumer products". Not present in all battery types. Contact **ANHUI LEOCH POWER SUPPLY CORP.** forfurther information.

TSCA

Ingredients in Leoch Battery's batteries are listed in the TSCA registry as follows:

Components	CAS Number	TSCA Status
Electrolyte Sulfuric Acid (H2SO4)	7664-93-9	Listed
Inorganic Lead Compound: Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO4)	7446-14-2	Listed
Tin (Sn)	7440-31-5	Listed
Arsenic (As)	7440-38-2	Listed
Antimony(Sb)	7440-36-0	Listed

CANADION REGULATIONS:

All chemical substances in this product are listed on the CEPA DSL/NDSL or are exempt from list requirement.

CALIFORNIA PROPOSITION 65:

WARNING:

- This product contains lead, a chemical known to the state of California to cause cancer and reproductive harm.
- Batteries also contain other chemicals known to the state of California to cause cancer.
- Wash hands after handling.

SECTION 16: OTHER INFORMATION

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide

DISCLAIMER:

ALL PERSONS USING THIS PRODUCT, ALL PERSONS WORKING IN AN AREA WHERE THIS PRODUCT IS USED, AND ALL PERSONS HANDLING THIS PRODUCT SHOULD BE FAMILIAR WITH THE CONTENTS OF THIS DATA SHEET. THIS INFORMATION SHOULD BE EFFECTIVELY COMMUNICATED TO EMPLOYEES AND OTHERS WHO MIGHT COME IN CONTACT WITH THE PRODUCT.

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