Batteri

iBVD

Dokument Id
5564692043-00050
Version
2

Skapad
2025-07-07
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2025-07-07

Uppgiftslämnaren reserverar sig för eventuella fel i produktinformationen eller felaktigt registrerade uppgifter och förbehåller sig rätten att korrigera och/eller komplettera produktinformation utan föregående avisering

1 GRUNDDATA

Varubeskrivning

Underhållsfritt AGM-batteri.

Övriga upplysningar

Klassificeringar

ETIM ›	-EC011878 - Batteri (bly) för fordon och applikationer
BK04 ›	
BSAB ›	
UNSPSC ›	-26111707

Leverantörsuppgifter

Företagsnamn
Milleteknik AB

Organisationsnummer
5564692043

Adress
Ögärdesvägen 8B

Hemsida
www.milleteknik.se

Miljökontaktperson

Namn
Johan Dahlpil

Telefon
031-34 00 230

E-post
johan.dahlpil@milleteknik.se

2 HÅLLBARHETSARBETE

Företagets certifiering

- ISO 9001
- ISO 14001

Policys och riktlinjer

3 INNEHÅLLSDEKLARATION

Kemisk produkt	Ja
Innehåller produkten elektronik	Nej
Omfattas varan av RoHs-direktivet	Nej
Varans vikt	0,6 - 44 kg

Vara / Delkomponenter

Koncentrationen har beräknats på hela varan

Ingående material /komponenter	Vikt-% i komponent	CAS-nr (alt legering)	EG-nr (alt legering)	Vikt % i produkt	Kommentar
ABS-plast		9003-56-9		5%	
Svavelsyra synonym E 513		7664-93-9	231-639-5	15%	
Bly		7439-92-1	231-100-4	70%	

Del av materialinnehållet som är deklarerat

Särskilt farliga ämnen

Följande ämnen finns med på kandidatförteckningen i en koncentration och som överstiger 0,1 vikts-%:

Namn	CAS-nr	EG-nr	Vikt % i produkt
Bly	7439-92-1	231-100-4	Inget angivet

Utgåva av kandidatförteckningen som har använts
2025-07-07

Nanomaterial

Innehåller produkten tillsatt nanomaterial, som är medvetet tillsatta för att uppnå en viss funktion?: Nej

Tillsatt högflourerade ämnen (PFAS)

Innehåller produkten tillsatt högflourerade ämnen (PFAS), som är aktivt tillsatta för att uppnå en specifik funktion?: Nej

Begränsningslistan

Innehåller varan/produkten, eller någon av dess delkomponenter, ämnen som gör att produkten inte uppfyller villkoren i Begränsningslistan (Reach Bilaga XVII)?: Nej

POPs-förordningen

Innehåller varan (eller någon av dess delkomponenter) ämnen som finns i POPs-förordningen?: Nej

Övrigt

Ämnen är redovisade ned till 2% viktprocent enligt iBVDs redovisningskrav. Eventuell avvikelse från redovisningskraven redovisas nedan

4 RÅVAROR

Återvunnet material

Innehåller varan återvunnet material: Nej

Träråvara

Träråvara ingår i varan: Nej

5 MILJÖPÅVERKAN

Finns en miljövarudeklaration framtagen enligt EN15804 eller ISO14025 för varan

Nej

Finns annan miljövarudeklaration

Nej

Om miljövarudeklaration eller annan livscykelanalys saknas, beskriv hur miljöpåverkan av varan beaktas ur ett livscykelperspektiv

Produkten är utformad för lång livslängd och enkel demontering vid avfallshantering. Miljöaspekter vägs in vid val av leverantörer, och transporter sker i huvudsak med återvinningsbara emballage.

6 DISTRIBUTION

Beskrivning av emballagehantering för distribution av varan

Produkter levereras i kartong. Vid behov används inrede av skumplast eller papp.

7 BYGGSKEDET

Ställer varan särskilda krav vid lagring?	Ja
Frostkänslig	
Ställer varan särskilda krav på omgivande byggvaror?	Nej

8 BRUKSSKEDET

Finns skötselanvisningar/skötselråd?	Nej
Finns en energimärkning enligt energimärkningsdirektivet (2017/1369/EU) för varan?	Nej

9 RIVNING

Kräver varan särskilda åtgärder för skydd av hälsa och miljö vid rivning/demontering?	Nej

10 AVFALLSHANTERING

Omfattas den levererade varan av förordningen (2014:1075) om producentansvar för elektriska och elektroniska produkter när den blir avfall?	Ja
Är återanvändning möjlig för hela eller delar av varan?	Nej
Är materialåtervinning möjlig för hela eller delar av varan?	Ja
Batterier tas om hand enligt gällande regler för att minimera påverkan vid produktens livscykelslut.	
Är energiåtervinning möjlig för hela eller delar av varan?	Nej
Har leverantören restriktioner och rekommendationer för återanvändning, material- eller energiåtervinning eller deponering?	Nej
När den levererade varan blir avfall, klassas den då som farligt avfall?	Ja
Avfallskod (EWC) för den levererade varan	Ej angivet
Klassas den inbyggda varan som farligt avfall?	Ej angivet
Avfallskod (EWC) för den inbyggda varan	Ej angivet

11 ARTIKELIDENTITETER

E-nummer	Leverantörens artikelnummer	GTIN
52 305 34	MT113-12V01-01	
52 305 36	MT113-12V07-01	
52 305 37	MT113-12V14-01	
52 305 38	MT113-12V20-01	
52 305 45	MT113-12V28-01	
52 305 46	MT113-12V45-01	
52 305 47	MT113-12V75-01	
52 305 49	MT113-12V100-01	
52 305 61	MT113-12V150-01	
52 305 62	MT114-12V55-FT	
52 305 64	MT114-12V125-FT	
52 305 65	MT114-12V150-FT	
52 305 67	MT114-12V92XL-00	
52 305 77	MT113-12V04-01	
52 305 78	MT113-12V02-01	
52 309 35	MT114-12V62-FT	
52 309 36	MT114-12V100H-FT	

12 Bilagor

Produktdatablad	
Prestandadeklaration	Miljovarudokument-UPLUS.pdf
Säkerhetsblad	Miljovarudokument-UPLUS.pdf
RoHs-intyg	
Miljövarudeklaration	
Skötselanvisning	

Övriga bifogade dokument

MATERIAL SAFETY DATA SHEET

VALVE-REGULATED LEAD-ACID BATTERY
SEALED MAINTENANCE-FREE NON-SPILLABLE

SECTION 1: PRODUCT IDENTIFICATION

Product Name:	Sealed Maintenance Free Lead-Acid Batteries: US, USC, USL, US FT, USG Series
Common Synonyms:	SLA, VRLA, Sealed Recombinent
DOT Description:	Wet Battery, Non-Spillable
Chemical Family:	Electrical Battery Standby
Date Issued:	March 17, 2010

SECTION 2: HAZARDOUS INGREDIENTS/ IDENTITY INFORMATION

COMPONENTS	Approx % by Wt.	CAS Number	Air Exposure Limits (μg/m^3)			LD_{50} ORAL (Rat) (mg/kg)
			ACGIH TLV	OSHA	NIOSH	
Inorganic Lead/Lead Compounds	65-75	7439-92-1	50	50	50	500
Tin (Sn)	<0.5	7440-31-5	2000	2000	--	--
Calcium (Ca)	<0.1	7440-70-2	--	--	--	--
Dilute Sulfuric Acid	10~20	7664-93-9	200	1000	1000	2140
Case Material: Acrylonitrile Butadine Styrene (ABS)	~5	9003-56-9	--	--	--	--

SECTION 3: PHYSICAL DATA

COMPONENTS	DENSITY g/cm^3	MELTING/BOILING (M/B) POINT	SOLUBILITY (H2O)	ODOR	APPEARANCE
Lead	11.34	327.46 °C, 621.43 °F (M)	None	None	Sliver-Gray Metal
Lead Sulfate	6.20	1170 °C, 2138 °F (B)	40 mg/l (15 °C, 59 °F)	None	White crystals or powder
Lead Dioxide	9.40	290 °C, 554 °F (M)	None	None	Dark brown Powder
Sulfuric Acid	~1.3	95°C -115°C , 203°F - 240°F (B)	100%	Sharp, penetrating, pungent odor	Clear Colorless Liquid
Case Material: Acrylonitrile Butadine Styrene (ABS)	1.05-1.06	130-160°C 266°F -320°F (M)	None	None	Solid

SECTION 4: 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> 2.4 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
Acrylonitrile Butadine Styrene (ABS)	None	--	Temperatures over 300 °C (572°F) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus.

SECTION 5: REACTIVITY DATA

COMPONENT	**Lead/lead compounds**
Stability	Stable
Incompatibility	Potassium, carbides, sulfides, peroxides, phosphorus, sulfurs, ketone, ester, petrolatum
Decomposition products	Oxides of lead and sulfur.
Condition to avoid	High temperature, Sparks and other sources of ignition.
COMPONENT	**Sulfuric Acid**
Stability	Stable
Incompatibility	Reactive metals, strong bases, most organic compounds
Decomposition products	Sulfuric dioxide, trioxide, hydrogen sulfide, hydrogen
Condition to avoid	Prohibit smoking, sparks, etc. from battery charging area. Avoid mixing acid with other chemicals.
POLYMERIZTION	Sulfuric acid will not polymerize

SECTION 6: HEALTH HAZARD DATA

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.

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 and weakness, and difficulty sleeping. The toxic effects of lead are cumulative and slow to appear. It affects the kidneys, reproductive and central nervous systems. The symptoms of lead overexposure are listed above. Exposure to lead from a battery most often occurs during lead reclamation operations through the breathing or ingestion of lead dust or fumes.

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: CARCINOGENICITY

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 8: 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 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 9: ECOLOGICAL INFORMATION

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

SECTION 10: 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.

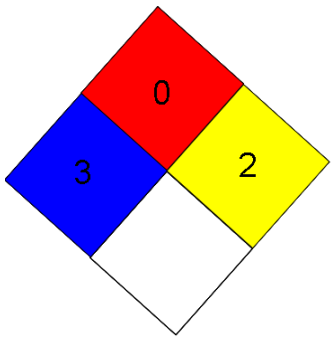
SECTION 11: NFPA HAZARD RATING

A. Not applicable under normal conditions.

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

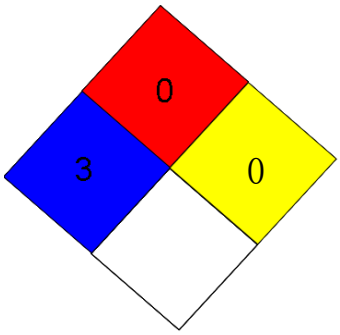
Sulfuric Acid

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



Lead and Lead Compounds

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



SECTION 12: TRANSPORTATION REGULATIONS (*Non-Restricted Status*)

GROUND – US DOT:

Our non-spillable lead acid batteries are under the U.S. Department of Transportation's (DOT) hazardous materials regulations but are excepted from these regulations since they meet all of the following requirements found at 49 CFR 173.159(d).

- When offered for transport, the batteries are protected against short circuits and securely packaged as required by 49 CFR 173.159(d) (1);
- The batteries and outer packaging are marked with the words "NONSPILLABLE" or "NONSPILLABLE BATTERY" as required by 49 CFR173.159(d) (2);
- The batteries comply with the vibration and pressure differential tests found in 49 CFR 173.159(d) (3).

AIRCRAFT – ICAO-IATA:

Our non-spillable lead acid batteries also are excepted from the international hazardous materials (also known as "dangerous goods") regulations since they comply with the following requirements:

- According to the requirements of Packing Instruction 806 **in IATA (International Air Transport Association) and ICAO (International Civil Aviation Organization)**, there should not be any electrolyte leakage after the vibration and pressure differential tests.
- And, Special Provision A67 states "Non-spillable batteries are not subject to these Instructions (Packing Instruction 806) if at the temperature of 55° C (131° F), the electrolyte will not flow from a ruptured or cracked case and there is no free liquid flow and if, when packaged for transport the terminals are protected from short circuit and unintentional activation."

VESSEL – IMO-IMDG:

Our non-spillable batteries are excepted from the international hazardous materials (also known as "dangerous goods") regulations since they conform to the requirements of IMDG Code Special Provision 238 .1 and .2, that is the batteries have passed the vibration and pressure differential performance tests, and at a temperature of 55°C, the electrolyte will not flow from a ruptured or cracked case and there is no free liquid flow. And, when packaged for transport, the terminals are protected from short circuit.

Additional Information:

- Each battery and the outer packaging must be plainly and durably marked "Nonspillable" or "Nonspillable Battery".
- Transport requires proper packaging and paperwork, including the nature and quantity of goods, per applicable origin/destination/customs points as-shipped.

SECTION 13: 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 D2002 (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 **SHENZHEN LEOCH BATTERY CORPORATION** 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	15~20

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 **SHENZHEN LEOCH BATTERY CORPORATION** for further information.

TSCA

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

Components	CAS Number	TSCA Status
Inorganic Lead Compound: Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO4)	7446-14-2	Listed
Calcium (Ca)	7440-70-2	Listed
Tin (Sn)	7440-31-5	Listed

CANANIN REGULATIONS:

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

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.

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.

THIS MATERIAL SAFETY DATA SHEET IS BASED UPON INFORMATION AND SOURCES AVAILABLE AT THE TIME OF PREPARATION OR REVISION DATE. WE DO NOT ASSURE RESPONSIBILITY AND DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE IN ANY CONNECTED WITH THE HANDLING, STORAGE, USE OF, OR DISPOSAL OF THE PRODUCT. FOR ADDITIONAL INFORMATION CONCERNING *SHENZHEN LEOCH BATTERY CORPORATION*. PRODUCTS OR QUESTIONS CONCERNING THE CONTENT OF THIS MSDS PLEASE CONTACT *SHENZHEN LEOCH BATTERY CORPORATION*.

MATERIAL SAFETY DATA SHEET

VALVE-REGULATED LEAD-ACID BATTERY
SEALED MAINTENANCE-FREE NON-SPILLABLE

SECTION 1: PRODUCT IDENTIFICATION

Product Name:	Sealed Maintenance Free Lead-Acid Batteries: US, USC, USL, US FT, USG Series
Common Synonyms:	SLA, VRLA, Sealed Recombinent
DOT Description:	Wet Battery, Non-Spillable
Chemical Family:	Electrical Battery Standby
Date Issued:	March 17, 2010

SECTION 2: HAZARDOUS INGREDIENTS/ IDENTITY INFORMATION

COMPONENTS	Approx % by Wt.	CAS Number	Air Exposure Limits (μg/m^3)			LD_{50} ORAL (Rat) (mg/kg)
			ACGIH TLV	OSHA	NIOSH	
Inorganic Lead/Lead Compounds	65-75	7439-92-1	50	50	50	500
Tin (Sn)	<0.5	7440-31-5	2000	2000	--	--
Calcium (Ca)	<0.1	7440-70-2	--	--	--	--
Dilute Sulfuric Acid	10~20	7664-93-9	200	1000	1000	2140
Case Material: Acrylonitrile Butadine Styrene (ABS)	~5	9003-56-9	--	--	--	--

SECTION 3: PHYSICAL DATA

COMPONENTS	DENSITY g/cm^3	MELTING/BOILING (M/B) POINT	SOLUBILITY (H2O)	ODOR	APPEARANCE
Lead	11.34	327.46 °C, 621.43 °F (M)	None	None	Sliver-Gray Metal
Lead Sulfate	6.20	1170 °C, 2138 °F (B)	40 mg/l (15 °C, 59 °F)	None	White crystals or powder
Lead Dioxide	9.40	290 °C, 554 °F (M)	None	None	Dark brown Powder
Sulfuric Acid	~1.3	95°C -115°C , 203°F - 240°F (B)	100%	Sharp, penetrating, pungent odor	Clear Colorless Liquid
Case Material: Acrylonitrile Butadine Styrene (ABS)	1.05-1.06	130-160°C 266°F -320°F (M)	None	None	Solid

SECTION 4: 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> 2.4 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
Acrylonitrile Butadine Styrene (ABS)	None	--	Temperatures over 300 °C (572°F) may release combustible gases. In case of fire: wear positive pressure self-contained breathing apparatus.

SECTION 5: REACTIVITY DATA

COMPONENT	**Lead/lead compounds**
Stability	Stable
Incompatibility	Potassium, carbides, sulfides, peroxides, phosphorus, sulfurs, ketone, ester, petrolatum
Decomposition products	Oxides of lead and sulfur.
Condition to avoid	High temperature, Sparks and other sources of ignition.
COMPONENT	**Sulfuric Acid**
Stability	Stable
Incompatibility	Reactive metals, strong bases, most organic compounds
Decomposition products	Sulfuric dioxide, trioxide, hydrogen sulfide, hydrogen
Condition to avoid	Prohibit smoking, sparks, etc. from battery charging area. Avoid mixing acid with other chemicals.
POLYMERIZTION	Sulfuric acid will not polymerize

SECTION 6: HEALTH HAZARD DATA

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.

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 and weakness, and difficulty sleeping. The toxic effects of lead are cumulative and slow to appear. It affects the kidneys, reproductive and central nervous systems. The symptoms of lead overexposure are listed above. Exposure to lead from a battery most often occurs during lead reclamation operations through the breathing or ingestion of lead dust or fumes.

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: CARCINOGENICITY

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 8: 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 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 9: ECOLOGICAL INFORMATION

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

SECTION 10: 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.

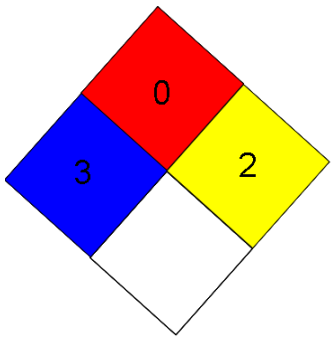
SECTION 11: NFPA HAZARD RATING

A. Not applicable under normal conditions.

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

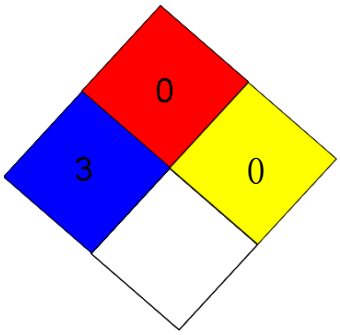
Sulfuric Acid

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



Lead and Lead Compounds

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



SECTION 12: TRANSPORTATION REGULATIONS (*Non-Restricted Status*)

GROUND – US DOT:

Our non-spillable lead acid batteries are under the U.S. Department of Transportation's (DOT) hazardous materials regulations but are excepted from these regulations since they meet all of the following requirements found at 49 CFR 173.159(d).

- When offered for transport, the batteries are protected against short circuits and securely packaged as required by 49 CFR 173.159(d) (1);
- The batteries and outer packaging are marked with the words "NONSPILLABLE" or "NONSPILLABLE BATTERY" as required by 49 CFR173.159(d) (2);
- The batteries comply with the vibration and pressure differential tests found in 49 CFR 173.159(d) (3).

AIRCRAFT – ICAO-IATA:

Our non-spillable lead acid batteries also are excepted from the international hazardous materials (also known as "dangerous goods") regulations since they comply with the following requirements:

- According to the requirements of Packing Instruction 806 **in IATA (International Air Transport Association) and ICAO (International Civil Aviation Organization)**, there should not be any electrolyte leakage after the vibration and pressure differential tests.
- And, Special Provision A67 states "Non-spillable batteries are not subject to these Instructions (Packing Instruction 806) if at the temperature of 55° C (131° F), the electrolyte will not flow from a ruptured or cracked case and there is no free liquid flow and if, when packaged for transport the terminals are protected from short circuit and unintentional activation."

VESSEL – IMO-IMDG:

Our non-spillable batteries are excepted from the international hazardous materials (also known as "dangerous goods") regulations since they conform to the requirements of IMDG Code Special Provision 238 .1 and .2, that is the batteries have passed the vibration and pressure differential performance tests, and at a temperature of 55°C, the electrolyte will not flow from a ruptured or cracked case and there is no free liquid flow. And, when packaged for transport, the terminals are protected from short circuit.

Additional Information:

- Each battery and the outer packaging must be plainly and durably marked "Nonspillable" or "Nonspillable Battery".
- Transport requires proper packaging and paperwork, including the nature and quantity of goods, per applicable origin/destination/customs points as-shipped.

SECTION 13: 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 D2002 (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 **SHENZHEN LEOCH BATTERY CORPORATION** 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	15~20

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 **SHENZHEN LEOCH BATTERY CORPORATION** for further information.

TSCA

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

Components	CAS Number	TSCA Status
Inorganic Lead Compound: Lead (Pb)	7439-92-1	Listed
Lead Oxide (PbO)	1317-36-8	Listed
Lead Sulfate (PbSO4)	7446-14-2	Listed
Calcium (Ca)	7440-70-2	Listed
Tin (Sn)	7440-31-5	Listed

CANANIN REGULATIONS:

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

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.

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.

THIS MATERIAL SAFETY DATA SHEET IS BASED UPON INFORMATION AND SOURCES AVAILABLE AT THE TIME OF PREPARATION OR REVISION DATE. WE DO NOT ASSURE RESPONSIBILITY AND DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE IN ANY CONNECTED WITH THE HANDLING, STORAGE, USE OF, OR DISPOSAL OF THE PRODUCT. FOR ADDITIONAL INFORMATION CONCERNING *SHENZHEN LEOCH BATTERY CORPORATION*. PRODUCTS OR QUESTIONS CONCERNING THE CONTENT OF THIS MSDS PLEASE CONTACT *SHENZHEN LEOCH BATTERY CORPORATION*.