1.0 Identification of Substance

Product Details

Product Name ABSORBED GLASS MAT LEAD ACID BATTERY

2.0 Hazards Identification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

HEALTH	ENVIRONMENT	PHYSICAL
Acute Toxicity (Oral/Dermal/Inhalation) Category 2 Skin Corrosion/Irritation Category 1A Eye Damage Category 1 A Reproductive Category 1A Carcinogenicity (lead compounds) Category 1B Carcinogenicity (arsenic) Category 1A Carcinogenicity (acid mist) Category 1A Specific Target Organ Category 2 Toxicity (repeated exposure)	Aquatic Chronic 1 Aquatic 1	Explosive Chemical Division 1.3

Hazard Statements - DANGER	Precautionary Statements
Harmful if swallowed, inhaled, or in contact with skin.	Wash thoroughly after handling.
Acid causes severe skin burns and eye damage.	Do not eat, drink or smoke when using this product.
May damage fertility or the unborn child if ingested or inhaled.	Wear protective gloves/protective clothing , eyes protection/face protection.
May cause harm to breast-fed children.	
May cause cancer if ingested or inhaled.	Avoid breathing dust/fume/gas/mist/vapors/spray.
Causes skin irritation, serious eye damage.	Use only outdoors or in a well-ventilated area.
Contact with internal components may cause irritation or severe burns	Avoid contact with internal acid.
Causes damage to central nervous system, blood and kidneys through prolong or repeated exposure if ingested or inhaled.	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

2.0 Hazards Identification (continue..)

Hazard Statements - DANGER	Precautionary Statements
Irritating to eyes, respiratory system and skin.	Avoid contact during pregnancy/while nursing
May form explosive air/gas mixture during charging.	Keep away from heat/sparks/open flames/hot surfaces. No smoking
Extremely flammable gas (hydrogen)	
Explosive, fire, blast or projection hazard.	
Hazards not otherwise classified	
(HNOC)	Not applicable
Unknown Toxicity	0.6% of mixture consists of ingredient(s) of unknown toxicity.
Oher information	Very toxic to aquatic life with long lasting effects.
Interactions with other chemicals	Use of alcoholic beverages may enhance toxic effects.

3.0 Composition/Information on ingredients

CAS#	COMPONENTS	Hazard category	Approximate % BY WEIGHT	ACGIH TLV	OSHA PEL
7439-92-1	Inorganic Lead/Lead Compounds	Acute-Chronic	65%~75%	50 µg/m3	50 µg/m3
7440-31-5	Tin	Chronic	<0.5%	2000µg/m3	2000 µg/m3
7440-70-2	Calcium	Reactive	<0.2%	N/A	N/A
7664-93-9	Sulfuric Acid absorbed in glass fiber material	Reactive-Oxidizer Acute -Chronic	16%~21%	1mg/m3	1mg/m3
–	Fiberglass Separator	Not applicable	5%	N/A	N/A
9003-56-9	Case Material: Acrylonitrile Butadiene Styrene(ABS)	Not applicable	5%-10%	N/A	N/A
NOTE: Inorganic lead and electrolyte (water and sulfuric acid solution) are the primary components of every battery made by Chloride Technologies or its subsidiaries. Other ingredients may be present dependent upon.					

4.0 First Aid Measures

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

Eyes	:	Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention.
Skin	:	Wash off skin thoroughly with water. Remove contaminated clothing and wash before reuse. In severe cases obtain medical attention.
Inhalation	:	Remove from exposure, rest and keep warm. In severe cases obtain medical attention.
Ingestion	:	Wash out mouth thoroughly with water and give plenty of water to drink. Obtain medical attention.
Further Treatment	:	All cases of eye contamination, persistent skin irritation and casualties who have swallowed this substance or been affected by breathing its vapors should be seen by a doctor.

5.0 Fire Fighting Measures

Extinguishing Media	: Water, CO2
Special Fire-Fighting Procedures	: Self-contained breathing apparatus.
Unusual Fire and Explosion Hazards	: Battery may vent when subjected to excessive heat-exposing battery contents.
Hazardous Combustion Products	: Carbon monoxide, carbon dioxide and other irritating and toxic fumes**.**

6.0 Accidental Release Measures

Steps to be taken in case material is released or spilled :

If the battery material is released, remove personnel from area until fumes dissipate.
Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.

Waste Disposal Method :
It is recommended to discharge the battery to the end, handing in the abandoned batteries to related department unified, dispose of the batteries in accordance with approval local, state and federal requirements. Consult state environmental protection agency and/or federal EPA.

7.0 Handling and Storage

Handling	Do not carry battery by terminals. Do not drop battery, or attempt to open battery case. Avoid contact with internal components of a battery. Do not subject product to open flame or fire and avoid situations that could cause arcing between terminals.
Storage	Store batteries under roof in cool, dry , well-ventilated areas separated from in compatible materials and from activities that may creates flames, spark or heat. Store sealed lead acid batteries at ambient temperature.
Charging chargers	There is a possible risk of electric shock from charging equipment and from strings of series connected batteries, whether or not being charged. Shut off power to whenever not in use and before detachment of any circuit connections. Batteries being charged may generate and release flammable hydrogen gas. Charging space should be ventilated. Prohibit smoking and avoid creation of flames and sparks nearby. Wear face and eye protection when near battery being charged.
Other	Follow Manufacture Recommendations regarding maximum recommended currents and operating temperature range. Do not overcharge beyond the recommended upper charging voltage limit. Applying pressure or deforming the battery may lead to disassembly followed by eye, skin and throat irritation.

8.0 Exposure Controls and Personal Protection

Engineering Controls (Ventilation)	Store and handle in well-ventilated area. If mechanical ventilation is used , components must be acid resistant. Handle batteries cautiously. Make certain vent caps on securely. If battery case is damaged and avoid bodily contact with internal components. Wear protective clothing, eye and face protection, when charging or handling batteries.
Hygiene Practices	Wash hands thoroughly before eating, drinking or smoking after handling batteries.
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.
Skin Protection	None required under normal conditions. If battery case is damaged, use rubber or plastic acid-resistant gloves with elbow length gauntlet, acid resistant apron, clothing and boots.
Eye Protection	None required under normal conditions. If battery case is damaged , use chemical goggles or face shield.
Other Protection	In areas where water and sulfuric acid solutions are handled in concentration greater than 1% , emergency eyewash stations and showers should be provided with unlimited water supply.

	Respiratory Protection	In all fire situations, use self-contained breathing apparatus.
	Hand Protection	In the event of leakage wear gloves.
	Eye Protection	Safety glasses are recommended during handling.
	Other	In the event of leakage, wear chemical apron.

9.0 Physical and Chemical Properties

Form	Battery
Color	Multicolor
Odor	Odorless
Voltage	2V,6V, 8V, 12V
Capacity	1.3AH – 3000AH
pH	Not applicable unless individual components exposed.
Flash point	Not applicable unless individual components exposed.
Flammability	Not applicable unless individual components exposed.
Relative density	Not applicable unless individual components exposed.
Solubility (water)	Not applicable unless individual components exposed.
Solubility (other)	Not applicable unless individual components exposed

10.0 Stability and Reactivity

Stability	Stable
Conditions to Avoid	Heating, mechanical abuse and electrical abuse.
Incompatibilities	Contact with combustibles and organic materials may cause fire and explosion. Also reacts violently with strong reducing agents, metals m sulfur trioxide gas, strong oxidizers and water. Contact with metals may produce toxic sulfur dioxide fumes and may release flammable hydrogen gas. No further concern for mechanical impact. Avoid contact with strong acids , bases, halides, halogenates, potassium nitrate permanganate, nascent.
Hazardous Decomposition	Sulfur trioxide, carbon monoxide, sulfuric acid mist, sulfur dioxide, hydrogen sulfide. Temperatures above the melting point are likely to produce toxic metal fume, vapor or dust, contact with strong acid or base or presence of nascent hydrogen may generate highly toxic arsine gas.
Hazardous Polymerization	Will not occur.

11.0 Toxicological Information

Inhalation, skin contact and eye contact are possible when the battery is opened.
Exposure to internal contents, the corrosive fumes will be very irritating to skin, eyes and mucous membranes.
Overexposure can cause symptoms of non-fibrotic lung injury and membrane irritation.

12.0 Ecological Information

Environment Fate — Lead is very persistent in soil and sediments. No data on environmental degradation. Mobility of metallic lead between ecological compartments is slow. Bioaccumulation of lead occurs in aquatic and terrestrial animals and plants but little occurs through the food chain. Most studies include lead compound and not element lead.

Proper use and disposal of the battery will not harm the environment.

13.0 Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation :
Dispose of the batteries in accordance with approved local, state and federal requirements.
Consult state environmental agency and/or federal EPA.

14.0 Transport Information

US DOT SHIPPING NAME — Battery, Wet, Non-Spill-able , Class 8, UN2800, PG, III.
Shipping Name — Batteries, Wet, Non-Spill-able.

All sealed lead-acid batteries are “non-spill-able batteries” as defined by the United States Hazardous Materials Regulations in Title 49 Code of Federal Regulations Part 173 159a and by the Transport Canada Dangerous Goods Regulations Part 12.9(11)(B). These batteries pass both the vibration Test and the Pressure Differential Test that are described in 49 CFR 173.159(f).
Non-spill-able batteries may be transported by air, truck, and boat and are excepted from packaging requirements of 173.159 under the following conditions which are found in 49 Code of Federal Regulation 173.159a, the international Air Transport Association (ATA 58th) Packing Instruction # 872, and IMDG Special Provision 238.

(1) The battery must be securely packed in strong outer packaging terminals are protected against short circuits, and meet requirements of 49 CFR 173.159(a)
(2) A non-spill able battery which is an integral part of and necessary for the operation of mechanical and electronic equipment must be securely fastened in the battery holder on equipment and protected in such a manner as to prevent damage and short circuits.
(3) The battery and outer packaging must be plainly and durably marked “ NON-SPILLABLE”or “ NON-SPILLABLE BATTERY”. The requirement to mark the outer package does not apply when the battery is installed in a piece of equipment that is transported unpacked.

If the battery complies with the 3 conditions listed above , then the Shipping Paper does not need to show the shipping name, hazard class and UN number and Packing Group. Also , Hazardous labels are not required.
Intact (unbroken) , spent lead-acid batteries considered to be hazardous material rather than hazardous waste for the purposes of transportation if they are being shipped in order to be recycled to a secondary lead smelter which operates under a permit from the U.S. EPA. 40 Code of Federal Regulations part 266.80(a) says that anyone who generates , collects , or transports spent lead-acid batteries can choose to manage the batteries under either the “Universal Waste” rule in 40 CFR part 273 or under 40 CFR part 266, subpart G.

15.0 Regulations

All components are listed on the TSCA; EINECS/ELINCS; and DSL, unless noted otherwise below.

U.S.FEDERAL REGULATIONS

TSCA Section 8b- Inventory Status: All chemical comprising this products are either exempted or listed on the TSCA Inventory.
TSCA Section 12b – Export Notification: If the finished product contains chemicals subject to TSCA Section 12b export notification , they are listed below:

Chemical	CAS#
None	NA

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION AND LIABILITY ACT)

Chemical present in the product which could require reporting under the statute:

Chemical	CAS#
Lead	7439-92-1
Sulfuric acid	7664-93-9

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

The finished product contains chemicals subject to the reporting requirements of Section 313 of SARA Title III.

Chemical	CAS#	% wt.
Lead	7439-92-1	65
Sulfuric acid	7664-93-9	25

CERCLA SECTION 311/312 HAZARD CATEGORIES

Note that the finished product is exempt from these regulations, but lead and sulfuric acid above the thresholds are reportable on Tier II reports.

Fire Hazard	No
Pressure Hazard	No
Reactivity Hazard	No
Immediate Hazard	Yes (Sulfuric acid is Corrosive)
Delayed Hazard	No

Note: Sulfuric acid is listed as an Extremely Hazardous Substance

15.0 Regulations (continue..)

STATES REGULATIONS(US)

California Proposition 65

The following chemicals identified to exist in the finished product as distributed into commerce are known to the State of California to cause cancer , birth defects, or other reproductive harm:

Chemical	*CAS#*	*% wt.*
Strong inorganic acid mists including sulfuric acid	NA	25
Lead	7439-92-1	65

California Consumer Product Volume Organic Compound Emissions

This product is not regulated as a Consumer Product for purposes of CARB/OTC VOC Regulations, as-sold for the intended purpose and into the industrial/Commercial supply chain.

INTERNATIONAL REGULATIONS (Non-US):

Canadian Domestic Substance List (DSL)

All ingredients remaining in the finished product as distributed into commerce are included on the Domestic Substances List.

WHMIS Classifications

Class E Corrosive materials present at greater than 1%

This product has been classified in accordance with the Hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the Controlled Products Regulations.

NPRI and Ontario Regulation 127/01

This product contains the following chemicals subject to the reporting requirements of Canada NPRI +/or Ont. Reg. 127/01

Chemical	CAS#	% wt.
Lead	7439-92-1	65
Sulfuric acid	7664-93-9	25

European Inventory of Existing Commercial Chemical Substances (EINECS)

All ingredients remaining in the finished product as distributed into commerce are exempt from, or included on, the European Inventory of Existing Inventory of Existing Commercial Chemical Substances.

16.0 Other Information

The above information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since this information may be applied under conditions beyond our control and with which may be unfamiliar and since data made available subsequent to the data hereof may suggest modifications of the information , we do not assume any responsibility for the results of its use. This information is furnish upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.