

Flooded Lead Acid Battery, Wet

Section 1. Identification

- GHS product identifier** : Flooded Lead Acid Battery, Wet
- Product code** : Not available.
- Other means of identification** : Not available.
- Product type** : This product, under the normal conditions of use, is an exempt "ARTICLE" and not subject to OSHA's Hazard Communication Standard and its requirements for preparation of Safety Data Sheets (SDS).

Relevant identified uses of the substance or mixture and uses advised against

- Product use** : Automotive, Truck, Marine
- Area of application** : Industrial applications.

- Manufacturer** : ACDelco
300 Renaissance Ctr Ste L1 Detroit,
MI, 48243-1403 United States
www.acdelco.com
Telephone (General): 1-800-223-3526

- Emergency telephone number (with hours of operation)** : **Manufacturer:** 1-800-814-3390 (24/7) (GM Security)
Infotrac 1-800-535-5053 (24/7)

Section 2. Hazards identification

This product, under the normal conditions of use, is an exempt "ARTICLE" and not subject to OSHA's Hazard Communication Standard and its requirements for preparation of Safety Data Sheets (SDS). Classifications provided are for the battery electrolyte and are only applicable in the event that the electrolyte is released.


- OSHA/HCS status** : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

- Classification of the substance or mixture** :
- H203 EXPLOSIVES - Division 1.3
 - H302 ACUTE TOXICITY (oral) - Category 4
 - H332 ACUTE TOXICITY (inhalation) - Category 4
 - H314 SKIN CORROSION - Category 1
 - H318 SERIOUS EYE DAMAGE - Category 1
 - H350 CARCINOGENICITY - Category 1A
 - H360 TOXIC TO REPRODUCTION - Category 1A
 - H362 TOXIC TO REPRODUCTION - Effects on or via lactation
 - H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute oral toxicity: 6%
Percentage of the mixture consisting of ingredient(s) of unknown acute inhalation toxicity: 6%

GHS label elements

Section 2. Hazards identification

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	<p>H203 - Explosive; fire, blast or projection hazard. H302 + H332 - Harmful if swallowed or if inhaled. H314 - Causes severe skin burns and eye damage. H350 - May cause cancer. H360 - May damage fertility or the unborn child. H362 - May cause harm to breast-fed children. H372 - Causes damage to organs through prolonged or repeated exposure. (blood system, kidneys, nervous system, teeth)</p>
<u>Precautionary statements</u>		
Prevention	:	<p>P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves, protective clothing and eye or face protection. P250 - Do not subject to grinding, shock or friction. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P271 - Use only outdoors or in a well-ventilated area. P260 - Do not breathe vapor. P263 - Avoid contact during pregnancy or while nursing. P270 - Do not eat, drink or smoke when using this product. P264 - Wash thoroughly after handling.</p>
Response	:	<p>P372 - Explosion risk in case of fire. P373 - DO NOT fight fire when fire reaches explosives. P370 + P380 - In case of fire: Evacuate area. P308 + P313 - IF exposed or concerned: Get medical advice or attention. P304 + P340, P310 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. P301 + P310, P330, P331 - IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting. P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor. P363 - Wash contaminated clothing before reuse. P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.</p>
Storage	:	<p>P401 - Store in accordance with all local, regional, national and international regulations. P405 - Store locked up.</p>
Disposal	:	<p>P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.</p>
Supplemental label elements	:	<p>Keep container tightly closed. Do not breathe vapor or spray. Do not taste or swallow. Use only with adequate ventilation. Wash thoroughly after handling.</p>
Hazards not otherwise classified	:	<p>Causes severe respiratory tract burns. Causes severe digestive tract burns.</p>

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

Ingredient name	Other names	%	CAS number
lead	-	≥50 - ≤75	7439-92-1
sulphuric acid	-	≥25 - ≤40	7664-93-9
lead dioxide	-	≥25 - ≤50	1309-60-0
1-Propene, homopolymer	-	≥10 - ≤25	9003-07-0
Fiber glass	-	≤10	-
antimony	-	≤5	7440-36-0
calcium	-	≤3	7440-70-2
lead sulphate	-	≤1	7446-14-2
tin	-	<1	7440-31-5
arsenic	-	<0.1	7440-38-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Section 4. First aid measures

This product, under the normal conditions of use, is an exempt "ARTICLE" and not subject to OSHA's Hazard Communication Standard and its requirements for preparation of Safety Data Sheets (SDS). Classifications provided are for the battery electrolyte and are only applicable in the event that the electrolyte is released.

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Section 4. First aid measures

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : Harmful if inhaled. Severely corrosive to the respiratory system.
- Skin contact** : Causes severe burns.
- Ingestion** : Severely corrosive to the digestive tract. Causes severe burns. May cause burns to mouth, throat and stomach. Harmful if swallowed.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

This product, under the normal conditions of use, is an exempt "ARTICLE" and not subject to OSHA's Hazard Communication Standard and its requirements for preparation of Safety Data Sheets (SDS). Classifications provided are for the battery electrolyte and are only applicable in the event that the electrolyte is released.

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.

Section 5. Fire-fighting measures

- Unsuitable extinguishing media** : Do not use water jet.
- Specific hazards arising from the chemical** : Explosive material with fire, blast or projection hazard. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
sulfur oxides
metal oxide/oxides
hydrogen fluoride
Arsine gas
- Special protective actions for fire-fighters** : First move people out of line-of-sight of the scene and away from windows. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool. Fight fire from protected location or maximum possible distance. Do not fight fire when it reaches the material. Withdraw from fire and let it burn.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Fire-fighters' protective clothing will only provide limited protection.
- Remark** : Avoid short circuiting the battery.

Section 6. Accidental release measures

This product, under the normal conditions of use, is an exempt "ARTICLE" and not subject to OSHA's Hazard Communication Standard and its requirements for preparation of Safety Data Sheets (SDS). Classifications provided are for the battery electrolyte and are only applicable in the event that the electrolyte is released.

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Accidental releases pose a serious fire or explosion hazard. Immediately contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). The spilled material may be neutralized with sodium carbonate, sodium bicarbonate or sodium hydroxide. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

This product, under the normal conditions of use, is an exempt "ARTICLE" and not subject to OSHA's Hazard Communication Standard and its requirements for preparation of Safety Data Sheets (SDS). Classifications provided are for the battery electrolyte and are only applicable in the event that the electrolyte is released.

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Avoid contact during pregnancy or while nursing. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid shock and friction. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Keep away from alkalis. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Separate from alkalis. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Section 8. Exposure controls/personal protection

Ingredient name	Exposure limits
lead	ACGIH TLV (United States, 1/2022). [Lead and inorganic compounds as Pb] TWA: 0.05 mg/m ³ , (as Pb) 8 hours.
	NIOSH REL (United States, 10/2020). TWA: 0.05 mg/m ³ 8 hours.
	OSHA PEL (United States, 5/2018). [Lead inorganic (as Pb)] TWA: 50 µg/m ³ , (as Pb) 8 hours.
sulphuric acid	NIOSH REL (United States, 10/2020). TWA: 1 mg/m ³ 10 hours.
	ACGIH TLV (United States, 1/2022). TWA: 0.2 mg/m ³ 8 hours. Form: Thoracic fraction
	OSHA PEL (United States, 5/2018). TWA: 1 mg/m ³ 8 hours.
lead dioxide	ACGIH TLV (United States, 1/2022). [Lead and inorganic compounds as Pb] TWA: 0.05 mg/m ³ , (as Pb) 8 hours.
	OSHA PEL (United States, 5/2018). [Lead inorganic (as Pb)] TWA: 50 µg/m ³ , (as Pb) 8 hours.
1-Propene, homopolymer	None.
Fiber glass	None.
antimony	ACGIH TLV (United States, 1/2022). [Antimony and compounds as Sb] TWA: 0.5 mg/m ³ , (as Sb) 8 hours.
	NIOSH REL (United States, 10/2020). [antimony] TWA: 0.5 mg/m ³ 10 hours.
	OSHA PEL (United States, 5/2018). [Antimony and compounds (as Sb)] TWA: 0.5 mg/m ³ , (as Sb) 8 hours.
calcium	None.
lead sulphate	ACGIH TLV (United States, 1/2022). [Lead and inorganic compounds as Pb] TWA: 0.05 mg/m ³ , (as Pb) 8 hours.
	OSHA PEL (United States, 5/2018). [Lead inorganic (as Pb)] TWA: 50 µg/m ³ , (as Pb) 8 hours.
tin	ACGIH TLV (United States, 1/2022). [Tin and inorganic compounds, excluding Tin hydride and indium tin oxide as Sn] TWA: 2 mg/m ³ , (as Sn) 8 hours. Form: Inhalable fraction
	NIOSH REL (United States, 10/2020). TWA: 2 mg/m ³ 10 hours.
	OSHA PEL (United States, 5/2018). [Tin, inorganic compounds (except oxides) (as Sn)] TWA: 2 mg/m ³ , (as Sn) 8 hours.
arsenic	ACGIH TLV (United States, 1/2022). [Arsenic and inorganic compounds as As] TWA: 0.01 mg/m ³ , (as As) 8 hours.
	NIOSH REL (United States, 10/2020). [arsenic inorganic compounds as As] CEIL: 0.002 mg/m ³ , (as As) 15 minutes.
	OSHA PEL (United States, 5/2018). [Arsenic, inorganic compounds (as As)]

Section 8. Exposure controls/personal protection

TWA: 10 µg/m³, (as As) 8 hours.

Biological exposure indices

Ingredient name	Exposure indices
lead	ACGIH BEI (United States, 1/2022) [LEAD AND INORGANIC COMPOUNDS] BEI: 200 µg/l, lead [in blood]. Sampling time: not critical.
lead dioxide	ACGIH BEI (United States, 1/2022) [LEAD AND INORGANIC COMPOUNDS] BEI: 200 µg/l, lead [in blood]. Sampling time: not critical.
lead sulphate	ACGIH BEI (United States, 1/2022) [LEAD AND INORGANIC COMPOUNDS] BEI: 200 µg/l, lead [in blood]. Sampling time: not critical.
arsenic	ACGIH BEI (United States, 1/2022) [ARSENIC, ELEMENTAL AND SOLUBLE INORGANIC COMPOUNDS (excludes gallium arsenide and arsine)] BEI: 35 µg As/l, inorganic arsenic plus methylated metabolites [in urine]. Sampling time: end of workweek.

Appropriate engineering controls : Not required under normal conditions of use.

Environmental exposure controls : Not required under normal conditions of use.

Individual protection measures

Hygiene measures : Not required under normal conditions of use. Eyewash stations and emergency showers should be available in case of exposure to leaking battery cells.

Eye/face protection : Not required under normal conditions of use. If operating conditions cause high dust concentrations to be produced, use dust goggles.

Skin protection

Hand protection : Not required under normal conditions of use. If handling damaged battery cells leaking electrolyte, wear chemical resistant gloves.

Body protection : Not required under normal conditions of use. If handling damaged battery cells leaking electrolyte, wear a long disposable lab coat or apron.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : A respirator is not needed under normal and intended conditions of product use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state	: Liquid. [Battery acid]
Color	: Clear.(Battery acid)
Odor	: Sharp.,Pungent.(Battery acid)
Odor threshold	: Not available.
pH	: <1 [Battery acid]
Melting point/freezing point	: 327.4°C (621.3°F) [Lead]
Boiling point, initial boiling point, and boiling range	: Electrolyte.(Battery acid): 110 - 112 °C (230 - 233.6 °F)°C Lead: 1749 °C (3180.2 °F)
Flash point	: Not available.
Evaporation rate	: Not available.
Flammability	: Avoid short circuiting the battery.
Lower and upper explosion limit/flammability limit	: Not available.
Vapor pressure	: 1.6 kPa (11.71095 mm Hg) [Battery acid]
Relative vapor density	: 3.4 [Air = 1] [Electrolyte.]
Relative density	: 1.21 to 1.3 [Battery acid]
Density	: Not available.
Solubility(ies)	: Not available.
Partition coefficient: n-octanol/water	: Not applicable.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
SADT	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.
Particle characteristics	
Median particle size	: Not applicable.
Other information	
Physical/chemical properties comments	: No additional information.

Section 10. Stability and reactivity

Reactivity	: This product has a fire hazard, giving rise to considerable heat and either a minor blast hazard or a minor projection hazard or both.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: shock friction high temperature Reactions may include the following: risk of projection hazard risk of causing fire

Section 10. Stability and reactivity

Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Avoid shock and friction.
Avoid high temperatures. Avoid overcharging. Do not open or disassemble.

Incompatible materials : Attacks many metals producing extremely flammable hydrogen gas which can form explosive mixtures with air.
Reactive or incompatible with the following materials:
alkalis
Reactive or incompatible with the following materials: oxidizing materials, reducing materials, combustible materials, organic materials, metals, acids and moisture.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
lead	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5.05 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-
sulphuric acid	LC50 Inhalation Dusts and mists	Rat	0.255 mg/l	4 hours
	LD50 Oral	Rat	2140 mg/kg	-
1-Propene, homopolymer	LD50 Oral	Rat	>8 g/kg	-
	LD50 Oral	Rat	100 mg/kg	-
antimony	LC50 Inhalation Dusts and mists	Rat - Male, Female	>4.75 mg/l	4 hours
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg	-
	LD50 Oral	Rat - Female	>2000 mg/kg	-
tin	LD50 Oral	Rat	763 mg/kg	-
	LD50 Oral	Rat	763 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
sulphuric acid	Eyes - Severe irritant	Rabbit	-	250 ug	-
	Eyes - Severe irritant	Rabbit	-	0.5 minutes 5 mg	-

Sensitization

Not available.

Mutagenicity

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Section 11. Toxicological information

Classification

Product/ingredient name	OSHA	IARC	NTP
lead	-	2B	Reasonably anticipated to be a human carcinogen.
sulphuric acid	-	1	Known to be a human carcinogen.
lead dioxide	-	2A	Reasonably anticipated to be a human carcinogen.
1-Propene, homopolymer	-	3	-
lead sulphate	-	2A	Reasonably anticipated to be a human carcinogen.
arsenic	+	1	Known to be a human carcinogen.

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
calcium	Category 3	-	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
lead	Category 1	oral, inhalation	blood system, kidneys, nervous system
sulphuric acid	Category 2	-	teeth
lead dioxide	Category 2	-	blood system, kidneys, nervous system
antimony	Category 2	inhalation	-
lead sulphate	Category 2	-	-
arsenic	Category 2	-	bone marrow, liver, nervous system

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : Harmful if inhaled. Severely corrosive to the respiratory system.

Skin contact : Causes severe burns.

Ingestion : Severely corrosive to the digestive tract. Causes severe burns. May cause burns to mouth, throat and stomach. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain
watering
redness

Section 11. Toxicological information

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced fetal weight
increase in fetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

- General** : Causes damage to organs through prolonged or repeated exposure.
- Carcinogenicity** : May cause cancer. Risk of cancer depends on duration and level of exposure.
- Mutagenicity** : No known significant effects or critical hazards.
- Reproductive toxicity** : May damage fertility or the unborn child.
May cause harm to breast-fed children.

Numerical measures of toxicity

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Flooded Lead Acid Battery, Wet	979.8	2889.6	N/A	48.7	1.0
lead	2500	2500	N/A	N/A	N/A
sulphuric acid	2140	N/A	N/A	N/A	0.255
lead dioxide	500	N/A	N/A	11	N/A
antimony	100	N/A	N/A	N/A	1.5
lead sulphate	500	N/A	N/A	N/A	1.5
tin	2500	2500	N/A	N/A	N/A
arsenic	100	N/A	N/A	3	N/A

Section 11. Toxicological information

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
lead	Acute EC50 105 ppb Marine water	Algae - Chaetoceros sp. - Exponential growth phase	72 hours
	Acute EC50 0.489 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 8000 µg/l Fresh water	Aquatic plants - Lemna minor	4 days
	Acute LC50 530 µg/l Fresh water	Crustaceans - Ceriodaphnia reticulata	48 hours
	Acute LC50 0.594 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.44 ppm Fresh water	Fish - Cyprinus carpio - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
	Chronic NOEC 0.25 mg/l Marine water	Algae - Ulva pertusa	96 hours
sulphuric acid	Chronic NOEC 0.03 µg/l Fresh water	Fish - Cyprinus carpio	4 weeks
	Acute EC50 >100 mg/l Fresh water	Algae - Desmodesmus subspicatus	72 hours
	Acute EC50 >100 mg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 42500 µg/l Marine water	Crustaceans - Pandalus montagui - Adult	48 hours
antimony	Acute LC50 36 µl/L Marine water	Fish - Agonus cataphractus	96 hours
	Acute LC50 18000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
calcium lead sulphate	Acute LC50 22 mg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 90 mg/l Fresh water	Fish - Oreochromis niloticus	30 days
arsenic	Acute IC50 82 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 54500 µg/l Fresh water	Crustaceans - Diaptomus forbesi	48 hours
	Acute LC50 750 µg/l Marine water	Fish - Cynoglossus joyneri - Larvae	96 hours
	Acute EC50 0.172 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute LC50 1700 µg/l Fresh water	Crustaceans - Simocephalus vetulus	48 hours
	Acute LC50 1900 µg/l Fresh water	Daphnia - Daphnia pulex	48 hours
	Acute LC50 9900 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 0.0625 mg/l Marine water	Algae - Ulva pertusa	96 hours

Conclusion/Summary : Not available.

Persistence and degradability

Not available.

Bioaccumulative potential

Not available.

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.




Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

This product, under the normal conditions of use, is an exempt "ARTICLE" and not subject to OSHA's Hazard Communication Standard and its requirements for preparation of Safety Data Sheets (SDS). Classifications provided are for the battery electrolyte and are only applicable in the event that the electrolyte is released.

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	UN2794	UN2794	UN2794
UN proper shipping name	Batteries, wet, filled with acid	BATTERIES, WET, FILLED WITH ACID	Batteries, wet, filled with acid
Transport hazard class(es)	8 	8 	8 
Packing group	-	-	-
Environmental hazards	No.	No.	No.

Additional information

DOT Classification : **Reportable quantity** 14.286 lbs / 6.4857 kg [1.3652 gal / 5.1679 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

Limited quantity No.

Packaging instruction Exceptions: 159. Non-bulk: 159. Bulk: 159.

Quantity limitation Passenger aircraft/rail: 30 kg.

Special provisions A51

IMDG : **Emergency schedules** F-A, S-B

Special provisions 295

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Quantity limitation Passenger and Cargo Aircraft: 30 kg. Packaging instructions: 870.

Cargo Aircraft Only: Packaging instructions: 870. Limited Quantities - Passenger Aircraft: Forbidden. Packaging instructions: Forbidden.

Special provisions A51, A164, A183, A802

Special precautions for user : Shipper must follow all applicable International, Federal, State, Provincial, and/or Local laws when preparing dangerous goods shipments including but not limited to classification, packaging, marking, labeling, and shipping dangerous goods.

Section 14. Transport information

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : TSCA 8(a) CDR Exempt/Partial exemption: Not determined
 TSCA 12(b) one-time export: lead sulphate
 TSCA 12(b) annual export notification: lead
 United States inventory (TSCA 8b): All components are active or exempted.
 Clean Water Act (CWA) 307: lead; lead dioxide; antimony; lead sulphate; arsenic
 Clean Water Act (CWA) 311: sulphuric acid; lead sulphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
sulphuric acid	≥25 - ≤40	Yes.	1000	66.3	1000	66.3

SARA 304 RQ : 2272.7 lbs / 1031.8 kg [217.2 gal / 822.2 L]

SARA 311/312

Classification : EXPLOSIVES - Division 1.3
 ACUTE TOXICITY (oral) - Category 4
 ACUTE TOXICITY (inhalation) - Category 4
 SKIN CORROSION - Category 1
 SERIOUS EYE DAMAGE - Category 1
 CARCINOGENICITY - Category 1A
 TOXIC TO REPRODUCTION - Category 1A
 TOXIC TO REPRODUCTION - Effects on or via lactation
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
 HNOC - Corrosive to digestive tract [severe]
 HNOC - Corrosive to respiratory tract [severe]

Composition/information on ingredients

Section 15. Regulatory information

Name	%	Classification
lead	≥50 - ≤75	CARCINOGENICITY - Category 2 TOXIC TO REPRODUCTION - Category 1A TOXIC TO REPRODUCTION - Effects on or via lactation SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
sulphuric acid	≥25 - ≤40	ACUTE TOXICITY (inhalation) - Category 2 SKIN CORROSION - Category 1A SERIOUS EYE DAMAGE - Category 1 CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 HNOC - Corrosive to digestive tract [severe] HNOC - Corrosive to respiratory tract [severe]
lead dioxide	≥25 - ≤50	OXIDIZING SOLIDS - Category 3 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
antimony	≤5	ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 2 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
calcium	≤3	SUBSTANCES AND MIXTURES, WHICH IN CONTACT WITH WATER, EMIT FLAMMABLE GASES - Category 2 SKIN IRRITATION - Category 2 EYE IRRITATION - Category 2A SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
lead sulphate	≤1	ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 CARCINOGENICITY - Category 1B TOXIC TO REPRODUCTION - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
arsenic	<0.1	ACUTE TOXICITY (oral) - Category 3 ACUTE TOXICITY (inhalation) - Category 3 CARCINOGENICITY - Category 1A SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	sulphuric acid	7664-93-9	≥25 - ≤40
	antimony	7440-36-0	≤5
Supplier notification	sulphuric acid	7664-93-9	≥25 - ≤40
	antimony	7440-36-0	≤5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Section 15. Regulatory information

- Massachusetts** : The following components are listed: LEAD; SULFURIC ACID; LEAD DIOXIDE; ANTIMONY; CALCIUM; SULFURIC ACID, LEAD (2+) SALT
- New York** : The following components are listed: Lead; Sulfuric acid; Antimony; Lead sulfate
- New Jersey** : The following components are listed: LEAD; SULFURIC ACID; LEAD DIOXIDE; ANTIMONY; CALCIUM; LEAD SULPHATE
- Pennsylvania** : The following components are listed: LEAD COMPOUNDS; SULFURIC ACID; LEAD COMPOUNDS; ANTIMONY COMPOUNDS; CALCIUM; SULFURIC ACID, LEAD(2+) SALT (1:1)

California Prop. 65

⚠ WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Strong inorganic acid mists containing sulfuric acid, Lead and lead compounds, Lead and lead compounds and Arsenic, which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Ingredient name	No significant risk level	Maximum acceptable dosage level
Lead	Yes.	Yes.
Strong inorganic acid mists containing sulfuric acid	-	-
Lead and lead compounds	-	-
Lead and lead compounds	-	-
Arsenic	Yes.	-

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Ingredient name	List name	Status
Lead (Pb)	Heavy metals - Annex 1	Listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	4
Flammability		0
Physical hazards		3

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Section 16. Other information

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

[National Fire Protection Association \(U.S.A.\)](#)



[Procedure used to derive the classification](#)

Classification	Justification
EXPLOSIVES - Division 1.3	Expert judgment
ACUTE TOXICITY (oral) - Category 4	Calculation method
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN CORROSION - Category 1	On basis of test data
SERIOUS EYE DAMAGE - Category 1	On basis of test data
CARCINOGENICITY - Category 1A	Calculation method
TOXIC TO REPRODUCTION - Category 1A	Calculation method
TOXIC TO REPRODUCTION - Effects on or via lactation	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1	Calculation method

[History](#)

Date of issue/Date of revision	: 05/02/2023
Date of previous issue	: No previous validation
Version	: 1
Prepared by	: Sphera Solutions
Key to abbreviations	: ATE = Acute Toxicity Estimate AMP = Acceptable maximum peak above the acceptable ceiling concentration for an 8-hr shift BCF = Bioconcentration Factor GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) N/A = Not available UN = United Nations
References	: HCS (U.S.A.) - Hazard Communication Standard International transport regulations

📌 Indicates information that has changed from previously issued version.

[Notice to reader](#)

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.