SAFETY DATA SHEET

1. Identification

Product identifier	**Battery Fluid Acid**
Other means of identification	None.
Recommended use	Electrolyte for Industrial/Commercial electrical storage batteries.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufacturer/Supplier	East Penn Manufacturing Company, Inc.
Address	102 Deka Road, Lyon Station PA 19536
Telephone number	(610) 682-6361
Contact person	East Penn EHS Department
Emergency telephone number	USA/Canada: CHEMTREC (800) 424-9300, Outside USA 1 (703) 527-3887
E-mail	contactus@eastpenn-deka.com

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 1
	Serious eye damage/eye irritation	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Causes severe skin burns and eye damage. May cause respiratory irritation. May cause cancer. Toxic to aquatic life.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. 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/doctor. Wash contaminated clothing before reuse.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations. Refer to manufacturer or supplier for information on recovery or recycling.
Hazard(s) not otherwise classified (HNOC)	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Sulphuric acid	7664-93-9	30 - 43
Other components below reportable levels		57 - 70

Composition comments Components not listed are either non-hazardous or are below reportable limits.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Inhalation Move injured person into fresh air and keep person under observation. Get medical attention immediately.

Skin contact Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.

Ingestion Rinse mouth thoroughly with water. DO NOT induce vomiting because of danger of aspirating liquid into lungs. Get medical attention immediately.

Most important symptoms/effects, acute and delayed Exposure not expected under normal use conditions. Exposure to liquid causes serious eye and tissue damage. May cause serious chemical burns to the skin. Inhalation of mists/vapors of this product may cause headache, dizziness, nausea, and respiratory tract irritation. Prolonged exposure may cause chronic effects.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General information IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Dry chemical powder. Foam. Carbon dioxide (CO2).

Unsuitable extinguishing media Water used for fire extinguishing, which has been in contact with the product, may be corrosive.

Specific hazards arising from the chemical Sulfur trioxide (corrosive and toxic). Risk of fire and explosion on contact with metals as a result of hydrogen formation. Container may explode in heat of fire.

Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards Substance does not burn but will support combustion.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid breathing mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Neutralize the spilled material before disposal. Stop the flow of material, if this is without risk. Sweep up or vacuum up spillage and collect in suitable container for disposal. Large spills may be neutralized with dilute alkaline solutions of soda ash, or lime.

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Dispose of waste and residues in accordance with local authority requirements. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling
In the event of damage resulting in a leak of exposed materials, avoid contact with contents of an open or damaged cell or battery. Do not get in eyes, on skin, or on clothing. Avoid breathing mist or vapor. Avoid prolonged exposure. When using, do not eat, drink or smoke. Provide adequate ventilation. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Protect containers from damage. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Sulphuric acid (CAS 7664-93-9)	PEL	1 mg/m3

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value	Form
Sulphuric acid (CAS 7664-93-9)	TWA	0.2 mg/m3	Thoracic fraction.

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Sulphuric acid (CAS 7664-93-9)	IDLH	15 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sulphuric acid (CAS 7664-93-9)	TWA	1 mg/m3

Biological limit values
No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls
Provide adequate ventilation. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection
Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection
Leak from a damaged or opened battery: Glove material: Nitrile. Use gloves with breakthrough time of 240 or 480 minutes. Minimum glove thickness 0.153 or 0.381 mm. Suitable gloves can be recommended by the glove supplier.

Other
Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection
Gas mask with acid gas canister and high-efficiency particulate filter. If respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134.

Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations
Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form Liquid.

Color Various.

Odor Odorless

Odor threshold None.

pH < 1

Melting point/freezing point Property has not been measured.

Initial boiling point and boiling range	> 235.4 - < 240.8 °F (> 113 - < 116 °C)
Flash point	Aqueous solution.
Evaporation rate	< 1
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	4 (as hydrogen gas)
Explosive limit - upper (%)	74 (as hydrogen gas)
Vapor pressure	13 mm Hg
Vapor density	Property has not been measured
Relative density	> 1.2 - < 1.3
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not applicable, product is a mixture.
Auto-ignition temperature	932 °F (500 °C) (as hydrogen gas)
Decomposition temperature	Property has not been measured.
Viscosity	Property has not been measured.
Other information	
Explosive properties	Not explosive.
Flammability	Substance does not burn but will support combustion.
Kinematic viscosity	Property has not been measured.
Oxidizing properties	Not oxidizing.
Partition coefficient (oil/water)	Not applicable, product is a mixture.

10. Stability and reactivity

Reactivity	Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Do not allow water to get into container because of reaction.
Incompatible materials	Reducing agents. Strong bases. Combustible organic materials. Finely divided metals. Strong oxidizing agents. Acids.
Hazardous decomposition products	At elevated temperatures: Sulfur dioxide. Sulfur trioxide. Carbon monoxide. Hydrogen sulfide. Sulfonic acid.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Mist or vapor may irritate the respiratory system. Difficulty in breathing. Inhalation of vapors or mists will likely result in mild to severe irritation of the nose, throat and lungs, depending on airborne concentration.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	May be harmful if swallowed. Causes digestive tract burns.
Symptoms related to the physical, chemical and toxicological characteristics	Exposure not expected under normal use conditions. Exposure to liquid causes serious eye and tissue damage. May cause serious chemical burns to the skin. Inhalation of mists/vapors of this product may cause headache, dizziness, nausea, and respiratory tract irritation. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity	May be harmful if swallowed.

Components	Species	Test Results
Sulphuric acid (CAS 7664-93-9)		
Acute		
Oral		
LD50	Rat	2140 mg/kg

Skin corrosion/irritation Causes severe skin burns.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity None under normal conditions. Exposure to contents of an open or damaged battery: Risk of cancer cannot be excluded with prolonged exposure. The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric acid" as a known human carcinogen, (IARC category 1). This classification applies only to mists containing sulfuric acid and not to sulfuric acid or sulfuric acid solutions.

IARC Monographs. Overall Evaluation of Carcinogenicity

Sulphuric acid (CAS 7664-93-9) 1 Carcinogenic to humans.

NTP Report on Carcinogens

Sulphuric acid (CAS 7664-93-9) Known To Be Human Carcinogen.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

Further information Chronic inhalation of sulfuric acid mist may increase the risk of lung cancer.

12. Ecological information

Ecotoxicity Toxic to aquatic life. Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Persistence and degradability No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential Potential to bioaccumulate is low.

Partition coefficient n-octanol / water (log Kow)

Sulphuric acid (CAS 7664-93-9) -2.2

Mobility in soil Potential for mobility in soil is very high.

Other adverse effects The product may affect the acidity (pH-factor) in water with risk of harmful effects to aquatic organisms.

13. Disposal considerations

Disposal instructions Neutralize electrolyte/sulfuric acid. Avoid discharge into water courses or onto the ground. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Empty containers should be taken to an approved waste handling site for recycling or disposal.

Hazardous waste code D002: Waste Corrosive material [pH ≤2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Avoid discharge into water courses or onto the ground.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN2796
UN proper shipping name	Battery fluid, acid
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Label(s)	8
Packing group	II
Environmental hazards	
Marine pollutant	No
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	A3, A7, B2, B15, IB2, N6, N34, T8, TP2, TP12
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN2796
UN proper shipping name	Battery fluid, acid
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	No.
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2796
UN proper shipping name	BATTERY FLUID, ACID
Transport hazard class(es)	
Class	8
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sulphuric acid (CAS 7664-93-9) Listed.

SARA 304 Emergency release notification

Sulfuric acid (aerosol forms only) (CAS 7664-93-9) 1000 LBS

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) One or more components of the mixture are not on the TSCA 8(b) inventory or are designated “inactive”.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Chemical name	CAS number	Reportable quantity (pounds)	Threshold planning quantity (pounds)	Threshold planning quantity, lower value (pounds)	Threshold planning quantity, upper value (pounds)
Sulphuric acid	7664-93-9	1000	1000		

SARA 311/312 Hazardous chemical Yes

Classified hazard categories
Skin corrosion or irritation
Serious eye damage or eye irritation
Carcinogenicity
Specific target organ toxicity (single or repeated exposure)

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Sulphuric acid	7664-93-9	30 - 43

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Sulphuric acid (CAS 7664-93-9)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Sulphuric acid (CAS 7664-93-9) 6552

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Sulphuric acid (CAS 7664-93-9) 20 %WV

DEA Exempt Chemical Mixtures Code Number

Sulphuric acid (CAS 7664-93-9) 6552

US state regulations

US. Massachusetts RTK - Substance List

Sulphuric acid (CAS 7664-93-9)

US. New Jersey Worker and Community Right-to-Know Act

Sulphuric acid (CAS 7664-93-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Sulphuric acid (CAS 7664-93-9)

US. Rhode Island RTK

Sulphuric acid (CAS 7664-93-9)

California Proposition 65

WARNING: This product can expose you to Sulphuric acid, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

California Proposition 65 - CRT: Listed date/Carcinogenic substance

Sulphuric acid (CAS 7664-93-9) Listed: March 14, 2003

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Sulphuric acid (CAS 7664-93-9)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 19-September-2017

Revision date 03-October-2023

Version # 06

HMIS® ratings Health: 3*
Flammability: 0
Physical hazard: 0

Disclaimer EastPenn cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.