Walter Louis
FLUID TECHNOLOGIES
530 South Fifth Street, Quincy, IL 62301-4896
V: 217-223-2017 F: 217-223-7734 8am-5pm US CST
After Hours: CHEMTREC 1-800-424-9300

SAFETY DATA SHEET (GHS Format)
Also available for download at:
http://www.WalterLouis.com/MSDS/

1. IDENTIFICATION
Trade Name: Sulfuric Acid 15% Solution
Chemical Name & Synonyms: Oil of Vitriol, H2SO4
UN/ID No: **UN1830**
Emergency telephone number: CHEMTREC (800) 424-9300 Poison Control: 1-800-222-1222

2. Hazards Identification
Classification: Corrosive

Signal Word: Danger
Hazard Statements:
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H350 May cause cancer.
H401 Toxic to aquatic life.
GHS – Classification

Acute toxicity - Oral	Category 3
Skin corrosion/irritation	Category 1A
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (one exposure)	Category 3 Respiratory Tract Irritation

Physical Hazards
Corrosive to metals Category 1
Precautionary Statements:
P260 - Do not breathe dust/fume/gas/mist/vapors/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P307 + P311 - IF exposed: Call a POISON CENTER or doctor/physician
P310 - Immediately call a POISON CENTER or doctor/physician
P330 - Rinse mouth
P334 - Immerse in cool water/wrap in wet bandages P405 - Store locked up
P363 - Wash contaminated clothing before reuse
P390 - Absorb spillage to prevent material damage
P406 - Store in corrosive resistant container with a resistant liner

P501 - Dispose of contents/ container to an approved waste disposal plant

3. Composition / Information on Ingredients

Chemical Name	CAS No	Weight-%
Sulfuric Acid	7664-93-9	13-17%
Water	7732-18-5	83-87%

4. First Aid Measures

General Advice:

P101 If medical advice/attention is needed; have product container or label at hand
P308 If exposed or concerned:
P314 Get Medical advice/attention if you feel unwell.

Eye Contact:

P305/P351/P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing during travel to medical attention.
P313 Get medical advice/attention.

Skin Contact:

P303/P361/P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P333/P313 If skin irritation or rash occurs: Get medical attention.
P363 Wash contaminated clothing before reuse.

Inhalation:

P304/ P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P313 Get medical advice/attention.

Ingestion:

P301/P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor
P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

Note to Physicians:

Product is a corrosive material. Use of gastric lavage or emesis is likely contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. Treat symptomatically.

Self-protection of the First Aider: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing.

5. Fire-fighting Measures

Flammable Properties:

Non-flammable, but may cause fire due to heat of decomposition reaction.

Explosive Properties:

No information available

Suitable Extinguishing Media:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment

Unsuitable Extinguishing Media:

No information available

Specific Hazards Arising from the Chemical:

The product causes burns of eyes, skin and mucous membranes; Thermal decomposition can lead to release of irritating and toxic gases and vapors; In the event of fire and/or explosion do not breathe vapors/smoke.

Protective Equipment and Precautions for Firefighters:

In the event of a fire, wear full protective clothing and MSHA/NIOSH (approved or equivalent) self-contained breathing apparatus with full facepiece operated in the pressure-demand or other positive pressure mode. Avoid water streams into concentrated product, as the dilution reaction generates heat.

6. Accidental Release Measures

Personal Precautions: Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental Precautions: Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods for Cleaning Up: Dike far ahead of liquid spill for later disposal. Soak up with inert absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Prevent product from entering drains. Dam up. After cleaning, flush away traces with water.

Other Information: Dilution of this product may generate significant amounts of heat.

7. Handling and Storage

Advice on Safe Handling: Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Use only with adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment with acid gas or organic vapor cartridges. Use only with adequate ventilation and in closed systems.

Storage Conditions: Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers.

Incompatible Materials: Strong bases; Oxidizing agents

8. Exposure Controls / Personal Protection

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH
Sulfuric Acid	7664-93-9	PEL	1 mg/m3
		OSHA Table Z-1 Limits for Air Contaminants	
		TWA	0.2 mg/m3
		ACGIH Threshold Limit Values	
		TWA	1 mg/m3
		NIOSH: Pocket Guide to Chemical Hazards	

Engineering Controls: Ensure adequate ventilation, especially in confined areas

Personal protective equipment (PPE)

Eye/Face Protection: Tight sealing safety goggles. Face protection shield. In case of insufficient ventilation, wear suitable respiratory equipment with acid gas or organic vapor cartridges.

Body Protection: Suitable protective clothing. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Check chemical resistance for the glove/boot material and the chemical handled.

General Hygiene Considerations:

When using do not eat, drink or smoke. Wash contaminated clothing before reuse. Keep away from food, drink and animal feeding stuffs. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes or clothing. Take off all contaminated clothing and wash it before reuse. Wear suitable gloves and eye/face protection.

9. Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance: Colorless to light yellow odorless Liquid
pH: 1.0
Specific Gravity: 1.10
Molecular Weight: 98.0 G/Mol
Water Solubility: Completely soluble
Melt/FreezePoint: Not determined- similar to water
Boiling Point: Not determined-similar to water
Flammability N/A
Flash Point: N/A
Vapor density: N/A

10. Stability and Reactivity

Stability: Stable under normal conditions of use and storage
Reactivity: May be corrosive to metals
Conditions to Avoid: Contact with incompatible materials
Incompatible Materials: Alkalies, most metals
Hazardous Decomposition Products:

Thermal decomposition can lead to release of irritating and toxic gases and vapors, including sulfur oxides and hydrogen gas.

Possibility of Hazardous Reactions: None under normal processing

11. Toxicological Information

Component: Sulfuric Acid CAS 7664-93-9	
Acute Oral Toxicity	LD50 Rat 2296.1375 mg/kg estimated

Acute inhalation toxicity	LC50 Guinea pig 0.0193 mg/l, 8 Hours estimated
Acute Dermal Toxicity	No data available
Eye irritation	Causes serious eye damage.
Target Organ Systemic Toxicant -Single exposure	May cause respiratory irritation.
Target Organ Systemic Toxicant - Repeated exposure	No data available
Skin corrosion/irritation:	Causes severe skin burns and eye damage.
Inhalation	No data available
Respiratory or skin sensitization:	This product is not expected to cause skin sensitization.
Reproductive toxicity:	This product is not expected to cause reproductive or developmental effects.
Carcinogenicity	May cause cancer. IARC,NTP
Aspiration hazard:	No data available
Germ cell mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

12. Ecological Information

Component: Sulfuric Acid CAS 7664-93-9	
EcoToxicity	Harmful to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
Toxicity, Fish	LC50 Fish 45.0644 mg/l, 96 hours estimated
Toxicity, invertebrates	No data available
Toxicity, Algae	No data available
Bioaccumulation	No data available
Mobility	No data available
Biodegradability	No data available
Biochemical OxygenDemand (BOD)	No data available
Other adverse effects:	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component

13. Disposal Considerations

Waste from Residues/Unused Products:

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. May be reacted out with sodium bicarbonate or sodium carbonate to a neutral pH and then discharged safely.

Concentrated product may be soaked up with absorbent material and landfilled in accordance with local, state, and federal regulations.

P501 Dispose of contents/container in accordance with local/state/federal regulations

Contaminated Packaging:

Do not reuse container for potable / food contact. Wash and rinse thoroughly before reuse / recycling

14. Transport information (USDOT):

Proper shipping Name:	Sulfuric Acid Solution
Hazard Class:	8
UN/ID No	UN1830
Packing Group	PG II
Reportable Quantity (RQ)	6,667 lbs (calculated)
Description:	UN1830, SULFURIC ACID SOLUTION, 8, PG II

15. Regulatory Information

All of the components in the product are on the following Inventory lists: TSCA (United States):, Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Australia (AICS), South Korea (KECL):, China (IECSC), Philippines (PICCS), This product contains a substance not listed on international inventories - it is for research and development use only.

Restrictions – REACH Title VII: No Data
CERCLA: Listed, Sulfuric Acid (CAS 7664-93-9)
CERCLA Hazardous Substances Reportable Quantity: 1000 lb concentrated, 6,667 lb at this dilution.

SARA 302 Extremely Hazardous Substances EPCRA RQ	Same as CERCLA
SARA 302 Extremely Hazardous Substances TPQ	Same as CERCLA
SARA 313 TRI Reporting	Same as CERCLA
SARA 311/312 Hazard Categories	
Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	Yes
US Safe Drinking Water Act:	Not Regulated

U.S. State Right-to-Know Regulations:
California Proposition 65: Sulfuric Acid is listed.

16. Other information

National Fire Protection Association (NFPA) Ratings:
NSF Certification: N/A

This Safety Data Sheet compiled from information provided by the raw chemical product manufacturer.