



50% Sulfuric Acid

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: 50% Sulfuric Acid
Common Name: Sulfuric Acid
SDS Number: 0187
Revision Date: 5/12/2016
Supplier Details: Alliance Group, Inc. 800-648-7339
N114 W18621 Clinton Drive
Germantown, WI 53022

Contact: CHEMTEL
Phone: 1-800-255-3924

2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Health, Serious Eye Damage/Eye Irritation, 1
Health, Skin corrosion/irritation, 1 A
Health, Acute toxicity, 1 Inhalation
Physical, Corrosive to Metals, 1
Health, Carcinogenicity, 2
Health, Acute toxicity, 5 Oral
Health, Specific target organ toxicity - Repeated exposure, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **DANGER**

GHS Hazard Pictograms:



GHS Hazard Statements:

H318 - Causes serious eye damage
H314 - Causes severe skin burns and eye damage
H330 - Fatal if inhaled
H290 - May be corrosive to metals
H351 - Suspected of causing cancer
H303 - May be harmful if swallowed
H373 - May cause damage to organs through prolonged or repeated exposure

GHS Precautionary Statements:

P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P234 - Keep only in original container.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - Wear respiratory protection.
P301+330+331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

- P310 - Immediately call a POISON CENTER or doctor/physician.
P363 - Wash contaminated clothing before reuse.
P404 - Store in a closed container.
P501 - Dispose of contents/container in accordance with local, regional, and international regulations.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry:	Eyes; Inhalation; Ingestion; Skin.
Target Organs:	Respiratory system; Eyes; Skin; Teeth.
Inhalation:	CORROSIVE: Can cause severe irritation and inflammation of the respiratory tract. May cause coughing, chest pain, shortness of breath, wheezing and pulmonary edema. Effects may be delayed. Can cause severe irritation and inflammation of the respiratory tract. May cause coughing, chest pain, shortness of breath, wheezing and pulmonary edema. Effects may be delayed.
Skin Contact:	CORROSIVE: May cause severe irritation and burns. Prolonged and repeated contact, even with dilute concentrations, can cause a high degree of tissue destruction. Large amounts can cause redness, swelling.
Eye Contact:	CORROSIVE: May cause severe irritation and burns. May cause permanent eye damage, blindness, corneal damage. Effects may vary depending on length of exposure

3 COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
7664-93-9	50%	Sulfuric acid

4 FIRST AID MEASURES

Inhalation:	If inhaled, move victim to fresh air. Give oxygen or artificial respiration if needed. GET IMMEDIATE MEDICAL ATTENTION.
Skin Contact:	Promptly flush skin with water for 15 minutes. Remove contaminated clothing immediately. Get immediate medical attention. Do not reuse clothing and shoes until cleaned. Discard leather articles such as shoes and belt. Do not apply oils and ointments unless ordered by a physician.
Eye Contact:	Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Get immediate medical attention.
Ingestion:	If swallowed: If fully conscious, drink a quart of water. Do NOT induce vomiting. Seek immediate medical attention. If unconscious, take to a hospital or physician. Never induce vomiting or give anything by mouth to an unconscious victim. For spontaneous vomiting, keep head below hips.

5 FIRE FIGHTING MEASURES

Flammability:	No data available.
Flash Point:	Not Applicable
Flash Point Method:	No data available.
Burning Rate:	No data available.
Autoignition Temp:	No data available.
LEL:	No data available.
UEL:	No data available.

Fire Fighting Methods

Evacuate area of unprotected personal. Wear protective clothing including NIOSH Approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire exposed containers and disperse vapors.

Unusual Fire or Explosion Hazards:

Product may react with some metals (aluminum, zinc, and tin) to release flammable hydrogen gas. Will react with organic material with evolution of heat and sulfur dioxide. Concentrated acid is a strong oxidizing agent. May cause ignition of combustible materials on contact with generation of sulfur dioxide fumes.

Extinguishing Media

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

Unsuitable fire extinguisher: No data available

6

ACCIDENTAL RELEASE MEASURES

Personal Precautions

Evacuate area. Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

Environmental Precautions

Prevent further leakage or spillage if safe to do so. Do not let products enter drains. Discharge into the environment must be avoided.

Spill

Soak up with inert absorbent material and dispose of as hazardous waste. Neutralize with sodium carbonate. Keep in suitable, closed containers for disposal.

7

HANDLING AND STORAGE

Handling Precautions:

Avoid contact with eyes, skin, or clothing. Avoid breathing vapors or mist. Wash thoroughly after handling. Do not puncture or drop containers.

Do not expose containers to open flame, excessive heat, or direct sunlight.

Storage Requirements:

CORROSIVE MATERIAL. Store in cool/dry area. Keep away from sunlight, heat, sparks, and flames. Keep away from incompatible materials. Keep container tightly closed. Do not store in unlabeled or mislabeled containers. Do not freeze. Highly corrosive to most metals with evolution of hydrogen gas. Explosive/flammable concentration of hydrogen gas may accumulate inside metals containers. Elevated temperatures will increase the corrosion rate of most metals.

8

EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls:

Provide local exhaust ventilation. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating mist. Keep levels below exposure limits.

Personal Protective Equipment:

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Respiratory

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.

Eyes and Face

Wear chemical safety goggles while handling this product. Wear additional eye protection such as a face shield when the possibility exists for eye contact with splashing or spraying liquid or airborne material.

Skin

Prevent contact with this product. Wear gloves and protective clothing depending on conditions of use.

Protective gloves: gauntlet-type, neoprene, nitrile.

<u>Component</u>	<u>OSHA PEL</u>	<u>ACGIH TWA/ TLV</u>
Sulfuric Acid	1mg/m3	0.2 mg/m3*

*Thoracic fraction

9

PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, light amber	Odor:	Mild odor.
Physical State:	Liquid	Molecular Formula:	No data available.
Odor Threshold:	No data available.	Solubility:	Complete
Particle Size:	No data available.	Softening Point:	No data available.
Spec Grav./Density:	1.40 @ 25 C	Percent Volatile:	No data available.
Viscosity:	No data available.		

Sat. Vap. Conc.: No data available.
Boiling Point: 255 F
Flammability: No data available.
Partition Coefficient: No data available.
Vapor Pressure: 8 mm Hg
pH: <1.0
Evap. Rate: <1
Molecular weight: No data available.
Decomp Temp: No data available.

Heat Value: No data available.
Freezing/Melting Pt.: -32 F
Flash Point: No data available.
Octanol: No data available.
Vapor Density: No data available.
VOC: No data available.
Bulk Density: No data available.
Auto-Ignition Temp: No data available.
UFL/LFL: No data available.

Lower Explosion Limits: No data available.
Upper Explosion Limits: No data available.

10 STABILITY AND REACTIVITY

Reactivity: No data available.
Chemical Stability: Product is stable under normal conditions.
Conditions to Avoid: Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames. Contact with organic material may cause fire and explosions. Contact with water may cause violent reaction with evolution of heat. To dilute: Add products slowly to lukewarm water, not water to product.
Materials to Avoid: Metals. Water. Alkalies. Strong Oxidizing Agents. Reducing agents. Carbonates. Cyanides. Sulfides. Carbides. Chlorates. Fulminates. Nitrates. Powdered metals. Organic materials. Combustible materials. Nitrogen compounds. Picrates. Bases. Halogens. Alkali metals, and many other reactive substances.
Hazardous Decomposition: Sulfur oxides. Sulfuric acid vapors. Hydrogen gas.
Hazardous Polymerization: Will not occur under normal conditions. May react with certain metals to produce flammable hydrogen gas. Hazardous gases are evolved on contact with chemicals such as cyanides, sulfides, carbides, etc.

11 TOXICOLOGICAL INFORMATION

Toxicity Data:

Eye Effects: Corrosive- Causes severe eye irritation and burns. May cause: blurred vision, redness, pain, conjunctivitis, ulcerations, tissue destruction, permanent eye damage, blindness.

Skin Effects: Corrosive- Causes severe irritation and burns. Concentrated solutions may cause: severe burns, severe necrosis, permanent skin damage. Prolonged and repeated exposure to dilute solutions may cause irritation, redness, pain and drying and cracking of the skin.

Inhalation Effects: Corrosive- Cause severe irritation and burns. Vapors and mists may damage: mucous membranes, respiratory tract. Vapors or mists may cause: coughing, sore throat, shortness of breath, labored breathing, choking, bronchospasms, chemical pneumonitis, pulmonary edema, death. Effects may be delayed. Chronic exposure may cause: dental erosions, discoloration of teeth, bronchitis, and bronchial emphysema.

Ingestion Effects: Corrosive- Causes severe irritation and burns. May cause damage to the: mouth, throat, esophagus, stomach, gastrointestinal tract. May cause: pain, vomiting, diarrhea, bleeding, labored breathing, burns or perforation of the gastrointestinal tract leading to ulceration and secondary infection, and death. Effects may be delayed. Aspiration into the lungs may cause chemical pneumonia and lung damage.

Chronic Effects: No data available.
Mutagenicity: No data available.
Teratogenicity: No data available.
Fertility Effects: No data available.

Component	Oral LD50	Dermal LD50	Inhalation LC50
Sulfuric Acid	Rat: 2140 mg/kg	No data available.	2H Rat: 510.0 mg/m3

Acute Toxicity Estimate (ATE):

Inhalation Vapor: 1.0201 mg/L

Carcinogenicity:

The International Agency for Research on Cancer (IARC) has determined that occupational exposure to strong-inorganic- acid mists containing sulfuric acid is carcinogenic to humans (group 1).
IARC: 1 - Group 1: Carcinogenic to humans (Sulfuric acid)

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: Known to be human carcinogen (Sulfuric acid)

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

12

ECOLOGICAL INFORMATION

Sulfuric acid

Toxicity to fish LC50 - *Gambusia affinis* (Mosquito fish) - 42 mg/l - 96 h.

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

13

DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, and federal regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind, or expose empty containers to heat, flame, sparks or other sources of ignition.

Hazardous Waste Number: D002

14

TRANSPORT INFORMATION

UN2796, Sulfuric acid with not more than 51% acid, 8, PGII

DOT Proper Shipping Name: Sulfuric Acid

DOT Technical Name:--

DOT Hazard Class: 8

DOT UN/NA Number: UN2796

Packing Group: II

Resp. Guide Page: --

Reportable Quantity (RQ):1000

15

REGULATORY INFORMATION

FEDERAL REGULATIONS

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category:

Immediate(Acute) Health Hazard: YES

Delayed (Chronic) Health Hazard: YES

Fire Hazard: NO

Sudden Release of Pressure Hazard: NO

Reactive Hazard: YES

SARA Section 302/304/313/HAP:

Component	CERCLA RQ (LBS)	SARA RQ(LBS)	SARA TPQ(LBS)	SARA SEC 313	US EPA HAP
Sulfuric Acid	1000	1000	1000	YES*	NO

*Sulfuric Acid appears on the Section 313 list. However, the listing only applies to the aerosol forms of sulfuric Acid * Reportable as zinc compounds

STATE REGULATIONS

California- The following components are listed under Prop 65:
Arsenic, Cadmium, Chromium, Lead, Nickel, Mercury

Wisconsin- The following components are listed as a Wisconsin HAP: Sulfuric Acid

16

OTHER INFORMATION

HMIS III: Health = 3(Chronic), Fire = 0, Physical Hazard = 2

HMIS	
HEALTH <input checked="" type="checkbox"/>	3
FLAMMABILITY	0
PHYSICAL HAZARD	2
PERSONAL PROTECTION <input type="checkbox"/>	

Publication Date: 5/12/2016

Prepared By: T Hartmann

Reason for Revision: GHS Update

This information is given in good faith and based on our current knowledge of the product.

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).