

50% Sulfuric Acid

SDS Number: 0187

Revision Date: 4/30/2020

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1 PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

Alliance Group Inc. 262-251-4977
N114 W18621 Clinton Drive
Germantown, WI 53022

Phone: 800-255-3924

Emergency: CHEMTEL

Product Identifier: 50% Sulfuric Acid

Common Name: Sulfuric Acid

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2 HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

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

Physical, Corrosive to Metals, 1
Health, Skin corrosion/irritation, 1 A
Health, Serious Eye Damage/Eye Irritation, 1
Health, Acute toxicity, 2 Inhalation
Health, Acute toxicity, 4 Inhalation
Health, Carcinogenicity, 1 A
Health, Specific target organ toxicity - Repeated exposure, 2

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **DANGER**

GHS Hazard Pictograms:



GHS Hazard Statements:

H290 - May be corrosive to metals
H314 - Causes severe skin burns and eye damage
H318 - Causes serious eye damage
H330 - Fatal if inhaled
H332 - Harmful if inhaled
H350 - May cause cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
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.



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Continue rinsing.
P310 - Immediately call a POISON CENTER or doctor/physician.
Specific treatment is urgent (refer to label)
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: Causes severe irritation and inflammation of the respiratory tract. Vapors or mists may damage: mucous membranes. respiratory tract. May cause coughing, sore throat, chest pain, shortness of breath, wheezing and pulmonary edema. Effects may be delayed. Chronic exposure may cause: dental erosions, discoloration of teeth. bronchitis. bronchial emphysema.
Skin Contact: CORROSIVE: Causes severe irritation and burns. Concentrated solutions may cause: severe burns. severe necrosis. permanent skin damage. Prolonged and repeated contact with dilute solutions can cause irritation, redness, pain and drying / cracking of skin.
Eye Contact: CORROSIVE: Causes severe irritation and burns. May cause: blurred vision, redness, pain, conjunctivitis, ulcerations, tissue destruction, permanent eye damage, blindness, corneal damage. Effects may vary depending on length of exposure
Ingestion: 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. May be fatal if swallowed. Effects may be delayed.

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"/>	

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COMPOSITION/INFORMATION OF INGREDIENTS

Chemical Ingredients:		
CAS#	%	Chemical Name:
7664-93-9	50%	sulfuric acid

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FIRST AID MEASURES

Inhalation: If inhaled, move victim to fresh air. Give oxygen or artificial respiration if needed. GET IMMEDIATE MEDICAL ATTENTION.

Skin Contact: If on skin, immediately 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: If in eyes, immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to



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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 or in convulsions, take immediately 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: Carbon dioxide. Dry chemical. Foam. 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 unprotected personnel from the area. Use personal protective equipment. Avoid breathing vapors, mist or gas. Maintain 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. Notify authorities if entry occurs.

Spill

Soak up with inert absorbent material and dispose of as hazardous waste. Neutralize with sodium carbonate (soda ash, lime) 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. Do not swallow. Wash thoroughly after handling. Empty containers retain product residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Do not expose containers to open flame, excessive heat, or direct sunlight.

Storage Requirements:

CORROSIVE MATERIAL. Store in cool/dry area, out of direct sunlight. Keep away from incompatible



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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:	<p>Hygiene Measures Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.</p> <p>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.</p> <p>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.</p> <p>Skin Prevent contact with this product. Wear gloves and protective clothing depending on conditions of use. Protective gloves: gauntlet-type, neoprene, nitrile.</p>

Component	OSHA PEL	ACGIH TWA/ TLV
Sulfuric Acid	1mg/m ³	0.2 mg/m ³ *

*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.	Heat Value:	No data available.
Saturated Vapor Concentration:	No data available.	Freezing/Melting Pt.:	-32 F
Boiling Point:	255 F	Flash Point:	No data available.
Flammability:	No data available.	Octanol:	No data available.
Partition Coefficient:	No data available.	Vapor Density:	No data available.
Vapor Pressure:	8 mm Hg	VOC:	No data available.
pH:	<1.0	Bulk Density:	No data available.
Evap. Rate:	<1	Auto-Ignition Temp:	No data available.
Molecular weight:	No data available.	UFL/LFL:	No data available.
Decomp Temp:	No data available.		

Lower Explosion Limits: No data available.

Upper Explosion Limits: No data available.

10**STABILITY AND REACTIVITY****Reactivity:** No data available.



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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.

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TOXICOLOGICAL INFORMATION

Toxicity Data:

EYE: Causes severe eye irritation and burns. May cause: blurred vision, redness, pain, conjunctivitis, ulcerations, tissue destruction, permanent eye damage.

» Sulfuric Acid: No data available

DERMAL: 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.

» Sulfuric Acid: Dermal LD50 - no data available
Skin Absorption - no data available

INHALATION: May be harmful if inhaled. Vapor or mists may damage mucous membranes and upper respiratory tract. Effects may be delayed. Chronic exposure may cause: dental erosion, discoloration of teeth, bronchitis.

» Sulfuric Acid: Inhalation LC50 - Rat = 510 mg/m³ -2H

ORAL: 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 of GI tract leading to ulceration and secondary infection. death. Aspiration into the lungs may cause chemical pneumonia and lung damage.

» Sulfuric Acid: Oral LD50 - Rat = 2140 mg/kg

OTHER: Circulatory collapse with clammy skin, weak and rapid pulse, shallow respirations, and scanty urine may follow skin contact or ingestion. Circulatory shock is often the immediate cause of death. The International Agency for Research on Cancer (IARC) has concluded that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogenic to man, causing cancer of the larynx. Although no direct link has been established between exposure to sulfuric acid itself, and cancer in man, exposure to any mist or aerosol during the use of this product should be avoided..

Carcinogenicity

This product contains 0.1% or more of the following chemicals listed by IARC, NTP, or OSHA as known or possible carcinogens: Sulfuric Acid Mist

Mutagenicity: No data available.

Teratogenicity: No data available.

Fertility Effects: No data available.

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ECOLOGICAL INFORMATION

ECOTOXICITY

Toxicity to fish

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

Persistence and degradability: no data available



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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.

RCRA - Hazardous Waste Code: D002 (Corrosive)

14 TRANSPORT INFORMATION

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

15 REGULATORY INFORMATION

This product does not contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

FEDERAL REGULATIONS

TSCA Inventory Status: All components of this product are listed "Active" on the Toxic Substances Control Act (TSCA) 8 (b) Inventory.

CERCLA / SARA Emergency Reporting A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title III (40 CFR Part 355). State or local reporting requirements may differ from federal requirements.

» **Sulfuric Acid - CERCLA Reporting amount 1000 lbs**

Clean Water Act (CWA): The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA. »
Sulfuric Acid

RCRA: The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA's four tests for determining hazardous wastes.

» **Waste Code D002 = Corrosivity**

STATE REGULATIONS

California- The following components are listed under Prop 65: Sulfuric Acid (CAS# 7664-93-9)

Massachusetts - RTK Substances: The following components are listed: Sulfuric Acid (CAS# 7664-93-9)



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New Jersey - RTK Substances: The following components are listed: Sulfuric Acid (CAS# 7664-93-9)

Pennsylvania - RTK Substances: The following components are listed: Sulfuric Acid (CAS# 7664-93-9)

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OTHER INFORMATION

Prepared By: P May

Reason For Revision: Updated GHS & Regulatory Information

Disclaimer:

This information is given in good faith and based on our current knowledge of the product. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

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