



Material Safety Data Sheet Alcoholic Sulfuric Acid

Section 1 - Chemical Product and Company Identification

MSDS Name:

Alcoholic Sulfuric Acid

Catalog Numbers:

LC10570

Synonyms:

None

Company Identification:

LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 – Composition, Information on Ingredients

| CAS# | Chemical Name: | Percent |
|-----------|----------------|---------|
| 67-56-1 | Methyl alcohol | balance |
| 7664-93-9 | Sulfuric acid | 2 |

Section 3 - Hazards Identification

Emergency Overview

Appearance: *Clear, colorless solution*

Danger! Flammable liquid. Poison. Corrosive. Harmful if inhaled. May be fatal or cause blindness if swallowed or absorbed through the skin. Central nervous system depressant. Cannot be made nonpoisonous. May cause irritation to eyes and skin. Solutions of sulfuric acid and methanol form dimethyl sulfate, which causes cancer.

Target Organs: *Eyes, skin, respiratory and gastrointestinal tracts, CNS, teeth*

Potential Health Effects

Eye:

Exposure to mist leads to watering and irritation. Eye contact may result in corneal lesions, vision loss or impairment, pain or blindness. 5 ppm and 40mg reported to cause moderate irritation.

Skin:

Skin contact may result in severe burns with blistering.



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Ingestion:

May be fatal or cause blindness if swallowed. May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. Vomiting and diarrhea of dark blood may occur; asphyxia from throat swelling. Stomach and esophagus may become perforated.

Inhalation:

May cause liver and kidney damage. May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema. May cause narcotic intoxication leading to headache, cramps, severe pain and blindness.

Chronic:

Exposure to dimethyl sulfate can cause cancer. Delayed symptoms of exposure include fluid in lungs, bronchitis or emphysema, pneumonia, dental erosion, conjunctivitis, and dermatitis with skin defatting.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid at once. Do NOT allow victim to rub or keep eyes closed.

Skin:

Get medical aid at once. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:

Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid at once.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Contact with metals may evolve flammable hydrogen gas. Hazardous reactions with strong oxidizers. Vapors are heavier than air, and may travel considerable distance and flash back from source of ignition. Flammable liquid is poisonous; wear respiratory gear. Use flooding quantities of water as fog (streams may spread fire). Avoid breathing toxic and corrosive vapors - keep upwind. Vapor-air mixtures explosive.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

Not applicable.

Flash Point:

Not applicable.



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NFPA Rating:

CAS# 67-56-1: Health- 1, Flammability- 3, Instability- 0.

CAS# 7664-93-9: Health- 3, Flammability- 0, Instability- 1.

Explosion Limits:

Lower: n/a Upper: n/a

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth), and place in suitable containers labeled for later disposal. May be carefully neutralized with slaked lime, limestone, or sodium bicarbonate to a pH 7. Shut off ignition sources; avoid vapors. Isolate and ventilate spill area. Keep out of sewers and drains. Label reclaimed spill material as flammable.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Ground and bond containers when transferring material. Avoid breathing dust, vapor, mist, or gas. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use with adequate ventilation. Keep away from flames and other sources of high temperatures that may cause material to form vapors or mists.

Storage:

Keep away from heat, sparks, and flame. Do not store near alkaline substances. Store capped at room temperature. Store in labeled non-reactive containers (glass, plastic) protected from heat and incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits:

| Chemical Name: | ACGIH | NIOSH | OSHA |
|----------------|---|--|-----------------------------|
| Methanol | 200 ppm TWA 260 mg/m ³ TWA | 200 ppm TWA 260 mg/m ³ TWA | 200 ppm TWA 250 ppm STEL |
| Sulfuric acid | 0.2 mg/m ³ TWA 3 mg/m ³ STEL | 1 mg/m ³ TWA | 1 mg/m ³ TWA |

OSHA Vacated PELs:

Methyl alcohol: 200 ppm TWA; 260 mg/m³ TWA

Sulfuric acid: 1 mg/m³ TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.



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Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

| | |
|-----------------------------------|---------------|
| Physical State: | Liquid |
| Color: | Colorless |
| Odor: | Solvent odor |
| pH: | Acidic |
| Vapor Pressure: | Not available |
| Vapor Density: | Not available |
| Evaporation Rate: | Not available |
| Viscosity: | Not available |
| Boiling Point: | Not available |
| Freezing/Melting Point: | Not available |
| Decomposition Temperature: | Not available |
| Solubility in water: | Soluble |
| Specific Gravity/Density: | Not available |
| Molecular Formula: | Not available |
| Molecular Weight: | Not available |

Section 10 - Stability and Reactivity

Chemical Stability:

Slowly forms methyl sulfate, dimethyl sulfate, and water.

Conditions to Avoid:

Incompatible materials, excess heat.

Incompatibilities with Other Materials:

Oxidizers, amines, bases, bromine, magnesium.

Hazardous Decomposition Products:

Carbon monoxide, oxides of sulfur, carbon dioxide, hydrogen gas, formaldehyde, methyl sulfate, dimethyl sulfate.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 67-56-1: PC1400000.

CAS# 7664-93-9: WS5600000.



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LD50/LC50:

CAS# 67-56-1:

Inhalation, rat: LC50 = 64000 ppm/4H

Oral, mouse: LD50 = 7300 mg/kg

Oral, rabbit: LD50 = 14200 mg/kg

Oral, rat: LD50 = 5628 mg/kg

Skin, rabbit: LD50 = 15800 mg/kg.

CAS# 7664-93-9:

Inhalation, mouse: LC50 = 320 mg/m³/2H

Inhalation, rat: LC50 = 510 mg/m³/2H

Oral, rat: LD50 = 2140 mg/kg.

Carcinogenicity:

Solutions of sulfuric acid and methanol slowly decompose to methyl sulfate and dimethyl sulfate, which are reasonably anticipated to cause cancer in humans (NTP), and are listed by CA Prop 65.

Epidemiology:

No information found

Teratogenicity:

No information found

Reproductive:

No information found

Mutagenicity:

No information found

Neurotoxicity:

No information found

Section 12 - Ecological Information

No information found

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Flammable liquids, corrosive n.o.s.
(Methanol, Sulfuric acid)

Hazard Class: 3

UN Number: UN2924

Packing Group: PGII



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Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 67-56-1 is listed on the TSCA Inventory.
CAS# 7664-93-9 is listed on the TSCA Inventory.

SARA Reportable Quantities (RQ):

CAS# 67-56-1: final RQ = 5000 pounds (2270 kg)
CAS# 7664-93-9: final RQ = 1000 pounds (454 kg)

CERCLA/SARA Section 313:

This material contains Methyl alcohol (CAS# 67-56-1, 98%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

This material contains Sulfuric acid (CAS# 7664-93-9, 2%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:

None of the chemicals in this product are considered highly hazardous by OSHA.

US State

State Right to Know:

Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Sulfuric acid can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California Regulations:

WARNING: This chemical contains Dimethyl Sulfate, a substance known to the state of California to cause cancer.

European/International Regulations

Canadian DSL/NDSL:

CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 7664-93-9 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.
CAS# 7664-93-9 is listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: January 21, 1999

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