

Acetic Anhydride

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SIGMA-ALDRICH

Material Safety Data Sheet

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Section 1 - Product and Company Information

Product Name Acetic anhydride-¹³C₄, 99 atom % ¹³C
Product Number 487821
Brand Aldrich Chemical

Company Sigma-Aldrich
Street Address 3050 Spruce Street
City, State, Zip, Country SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5765
Fax: 800 325 5052
Emergency Phone: 414 273 3850 Ext. 5996

Section 2 - Composition/Information on Ingredient

| Substance Name | CAS # | SARA 313 | EC no | Annex I Index Number |
|--------------------------------------|-------------|----------|-------|----------------------|
| ACETIC-13C2 ANHYDRIDE, 99 ATOM % 13C | 114510-14-4 | No | | |

Formula C₄H₆O₃
Synonyms

Section 3 - Hazards Identification

Emergency Overview
Combustible (USA) Flammable (EU). Corrosive.
Harmful by inhalation, in contact with skin and if swallowed. Causes burns.
Lachrymator.

HMIS Rating
Health: 3 Flammability: 2 Reactivity: 2

NFPA Rating
Health: 3 Flammability: 2 Reactivity: 2

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Immediate Treatment - Work Site
In case of contact, immediately flush eyes or skin with copious amounts of water for at least 15 minutes while removing contaminated clothing and shoes.

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Eye Exposure
Assure adequate flushing of the eyes by separating the eyelids with fingers.

Section 5 - Fire Fighting Measures

Flash Point: 130 °F 54 °C

Autolignition Temp: N/A

Extinguishing Media Suitable
Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Exposure Hazard(s) Material
Harmful liquid. Corrosive, Lachrymator.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area.

Procedure(s) of Personal Precaution(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Cover with an activated carbon adsorbent, take up and place in closed containers. Transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling User Exposure
Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

Storage

Suitable
Keep tightly closed. Keep away from heat and open flame.

Special Requirements

Moisture sensitive.

Section 8 - Exposure Controls / PPE**Engineering Controls**

Safety shower and eye bath. Use only in a chemical fume hood.

General Hygiene Measures

Wash thoroughly after handling. Discard contaminated shoes. Wash contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties**Appearance**

| | | | |
|--------------|-----------|-------------|--------------|
| Color | Colorless | Form | Clear liquid |
|--------------|-----------|-------------|--------------|

Molecular Weight: 108.14 AMU

| | |
|------------------------------|-------------------------|
| pH | N/A |
| BP/BP Range | 138 - 140 °C |
| MP/MP Range | -73 °C |
| Freezing Point | N/A |
| Vapor Pressure | N/A |
| Vapor Density | N/A |
| Saturated Vapor Conc. | N/A |
| SG/Density | 1.124 g/cm ³ |
| Bulk Density | N/A |
| Odor Threshold | N/A |
| Volatile% | N/A |
| VOC Content | N/A |
| Water Content | N/A |
| Solvent Content | N/A |
| Evaporation Rate | N/A |
| Viscosity | N/A |
| Partition Coefficient | N/A |
| Decomposition Temp. | N/A |
| Flash Point °F | 130 °F |
| Flash Point °C | 54 °C |
| Explosion Limits | N/A |

Method: closed cup
Method: closed cup

| | |
|--------------------------|------|
| Flammability | N/A |
| Autoignition Temp | N/A |
| Refractive Index | 1.39 |
| Solubility | N/A |

N/A = not available

Section 10 - Stability and Reactivity**Stability**

Conditions to Avoid
Moisture

Materials to Avoid

Acids, Bases, Reducing agents, Finely powdered metals.

Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide.

Section 11 - Toxicological Information**Route of Exposure**

Skin Absorption
Harmful if absorbed through skin.
Inhalation
Harmful if inhaled.
Ingestion
Harmful if swallowed.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

RTECS Number: N/A

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations**Appropriate Method of Disposal of Substance or Preparation**

This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information**DOT**

Proper Shipping Name: Acetic anhydride
UN#: 1715
Class: 8
Packing Group: Packing Group II
Hazard Label: Corrosive
Hazard Label: Flammable liquid
PIH: Not PIH

IATA

Proper Shipping Name: Acetic anhydride
IATA UN Number: 1715
Hazard Class: 8
Packing Group: II

Section 15 - Regulatory Information**EU Additional Classification**

Symbol of Danger: C
Indication of Danger
Corrosive.

Risk Statements R: 10 34
Flammable. Causes burns.

Handwritten red text: HCS 110 11/19/03

Safety Statements S: 26 45

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Classification and Label Text

Indication of Danger

Combustible (USA) Flammable (EU). Corrosive.

Risk Statements

Harmful by inhalation, in contact with skin and if swallowed. Causes burns.

Safety Statements

Keep away from sources of ignition - no smoking. Do not breathe vapor. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

US Statements

Lachrymator.

United States Regulatory Information

SARA Listed: No

Canada Regulatory Information

WHMIS Classification

This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

Section 16 - Other Information

Disclaimer

For R&D use only. Not for drug, household or other uses.

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

