

[Return back](#)



SDS #: 6
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Acetic Anhydride Safety Data Sheet (SDS)

SECTION 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Acetic Anhydride

Signal Word
DANGER

Flinn Scientific, Inc. P.O. Box 219, Batavia, IL 60510 (800) 452-1261
Chemtrec Emergency Phone Number: (800) 424-9342

Pictograms

SECTION 2 — HAZARDS IDENTIFICATION

Hazard class: Flammable liquids (Category 3). Flammable liquid and vapor (H226). Keep away from heat, sparks, open flames, and hot surfaces. No smoking (P210).



Hazard class: Acute toxicity, oral (Category 4). Harmful if swallowed (H302). Do not eat, drink or smoke when using this product (P270).



Hazard class: Skin corrosion (Category 1). Causes severe skin burns and eye damage (H314).



Hazard class: Acute toxicity, inhalation (Category 4). Harmful if inhaled (H332). Avoid breathing mist, vapors or spray (P261).

SECTION 3 — COMPOSITION, INFORMATION ON INGREDIENTS

Component Name	CAS Number	Formula	Formula Weight	Concentration
Acetic anhydride	108-24-7	(CH ₃ CO) ₂ O	102.09	
Synonyms: Acetic oxide, Acetyl ether				

SECTION 4 — FIRST AID MEASURES

Immediately call a POISON CENTER or physician (P310). If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing (P304+P340). If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do so. Continue rinsing (P305+P351+P338). If on skin or hair: Immediately remove all contaminated clothing. Rinse skin with water (P303+P361+P353). Wash contaminated clothing before reuse (P363). If swallowed: Rinse mouth. Do NOT induce vomiting (P301+P330+P331). Call a POISON CENTER or physician if you feel unwell (P301+P312).

SECTION 5 — FIRE FIGHTING MEASURES

Class II combustible liquid.
Flash point: 49 °C (CC) Flammable limits: Lower: 2.7% Upper: 10.3% Autoignition
Temperature: 316 °C

NFPA Code
H-3
F-2

When heated to decomposition, may emit toxic fumes.

R-1

In case of fire: Use a tri-class dry chemical fire extinguisher (P370+P378).

SECTION 6 — ACCIDENTAL RELEASE MEASURES

Remove all ignition sources and ventilate area. Contain the spill with sand or other inert absorbent material, neutralize with sodium bicarbonate or calcium hydroxide, and deposit in a sealed bag or container. See Sections 8 and 13 for further information.

SECTION 7 — HANDLING AND STORAGE

Flinn Suggested Chemical Storage Pattern: Organic #1. Store with acids, anhydrides and peracids. Store away from nitric acid.

Keep dry. Reacts violently with water. Should store in a dedicated acid cabinet or Flinn Saf-Cube™.

Keep cool (P235). Keep container tightly closed (P233). Use only in a hood or in a well ventilated area.

SECTION 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Wear protective gloves, protective clothing, and eye protection (P280). Wash hands thoroughly after handling (P264). Use only in a hood or in a well ventilated area.

Exposure guidelines: TLV 1 ppm Ceiling 3 ppm (ACGIH) PEL 5 ppm (OSHA)

SECTION 9 — PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear, colorless liquid.

Odor: Pungent vinegar-like odor. Odor Threshold: 0.13 uL/L

Soluble: Slowly in water. Reacts with water, exothermic. See Sections 7 and 10. Viscosity: 0.843 mPa-s @ 25 °C

Vapor Pressure: 0.680 kPa (5.1 mm Hg) @ 25 °C

Boiling point: 140 °C

Evaporation rate: 0.46

Melting point: -73 °C

Specific gravity: 1.08

Vapor density: 3.52

Heavier than air

SECTION 10 — STABILITY AND REACTIVITY

Avoid contact with water, mineral acids, oxidizers, and alkalis. Reacts violently (sometimes delayed) with water.

Forms ethyl acetate in solution with alcohol.

Shelf life: Good, if stored properly.

SECTION 11 — TOXICOLOGICAL INFORMATION

Exposure routes: inhalation, ingestion, skin and/or eye contact

Acute effects: Corrosive to all body tissues, pulmonary edema.

Chronic effects: Pulmonary edema, blindness.

Target organs: Respiratory system, eyes and skin.

ORL-RAT LD₅₀: 1780 mg/kg

IHL-RAT LC₅₀: 1000 ppm/4 hour

SKN-RBT LD₅₀: 4 mL/kg

SECTION 12 — ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 — DISPOSAL CONSIDERATIONS

Please review all federal, state and local regulations that may apply before proceeding.
Flinn Suggested Disposal Method #24a is one option.

SECTION 14 — TRANSPORT INFORMATION

Shipping name: Acetic Anhydride. Hazard class: 8, Corrosive, Flammable Liquid. UN number: UN1715

SECTION 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (203-564-8). RCRA code D001, D002

SECTION 16 — OTHER INFORMATION

This Safety Data Sheet (SDS) is for guidance and is based upon information and tests believed to be reliable. Flinn Scientific, Inc. makes no guarantee of the accuracy or completeness of the data and shall not be liable for any damages relating thereto. The data is offered solely for your consideration, investigation, and verification. The data should not be confused with local, state, federal or insurance mandates, regulations, or requirements and CONSTITUTE NO WARRANTY. Any use of this data and information must be determined by the science instructor to be in accordance with applicable local, state or federal laws and regulations. The conditions or methods of handling, storage, use and disposal of the product(s) described are beyond the control of Flinn Scientific, Inc. and may be beyond our knowledge. FOR THIS AND OTHER REASONS, WE DO NOT ASSUME RESPONSIBILITY AND EXPRESSLY DISCLAIM LIABILITY FOR LOSS, DAMAGE OR EXPENSE ARISING OUT OF OR IN ANY WAY CONNECTED WITH THE HANDLING, STORAGE, USE OR DISPOSAL OF THIS PRODUCT(S).

N.A. = Not available, not all health aspects of this substance have been fully investigated.
N/A = Not applicable

Consult your copy of the Flinn Science Catalog/Reference Manual for additional information
about laboratory chemicals.

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