

Safety Data Sheet (SDS) 3/24/25: File reviewed, more current MSDS/SDS not available. CAS

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.

NFPA Code

Flash point: 49 °C (CC) Flammable limits: Lower: 2.7% Upper: 10.3% Autoignition

H-3

Temperature: 316 °C

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.

Boiling point: 140 °C

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

Evaporation rate: 0.46

Melting point: -73 °C

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

Specific gravity: 1.08

Vapor density: 3.52

Heavier than air

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

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

ORL-RAT LD₅₀: 1780 mg/kg

IHL-RAT LC₅₀: 1000 ppm/4 hour

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

SKN-RBT LD₅₀: 4 mL/kg

Chronic effects: Pulmonary edema, blindness.

Target organs: Respiratory system, eyes and skin.

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

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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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