

# Material Safety Data Sheet

## Vinyl Acetate

ACC# 24900

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Vinyl Acetate

**Catalog Numbers:** A4925001, NC9253394, O5057 4, O5057-4, O50574, O5057FB115, O5057FB115PART

**Synonyms:** Ethenyl acetate; Ethenyl ethanoate; Vinyl A monomer; Vinyl acetate monomer; Vinyl ethanoate; 1-Acetoxyethylene

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
108-05-4	Vinyl acetate	ca. 100	203-545-4

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: 17.6 deg F.

**Danger! Extremely flammable liquid.** Forms explosive mixture with air. Possible risks of irreversible effects. May cause skin irritation. May cause respiratory and digestive tract irritation. May cause severe skin irritation and possible burns. May cause cancer based on animal studies. Potential cancer hazard. May form explosive peroxides.

**Target Organs:** Central nervous system, liver.

#### Potential Health Effects

**Eye:** Contact with eyes may cause severe irritation, and possible eye burns.

**Skin:** May cause mild skin irritation. Material evaporates quickly from open skin. However, it may cause burns if trapped under clothing.

**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

**Inhalation:** May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Vapors may cause dizziness or suffocation.

**Chronic:** Possible cancer hazard based on tests with laboratory animals. Prolonged or repeated skin contact may cause sensitization dermatitis and possible destruction and/or ulceration.

### 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 immediately.

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

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

**Inhalation:** Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

**Notes to Physician:** Treat symptomatically and supportively.

**Antidote:** None reported.

### 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. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. May accumulate static electrical charges, and may cause ignition of its own vapors. Polymerizes readily if not inhibited; heat can initiate reaction.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Do NOT use water directly on fire. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water. Use water only in flooding quantities as fog.

**Flash Point:** 17.6 deg F ( - 8.00 deg C)

**Autoignition Temperature:** 798.8 deg F ( 426.00 deg C)

**Explosion Limits, Lower:** 2.6

**Upper:** 14.0

**NFPA Rating:** (estimated) Health: 2; Flammability: 3; Instability: 2

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Wash clothing before reuse. Discard contaminated shoes. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Keep away from polymerization catalysts. Storage for long periods is not recommended.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Vinyl acetate	10 ppm TWA; 15 ppm STEL	none listed	none listed

**OSHA Vacated PELs:** Vinyl acetate: 10 ppm TWA; 30 mg/m<sup>3</sup> 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.

**Skin:** Wear appropriate protective gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid

**Appearance:** clear, colorless

**Odor:** sweetish odor - sharp odor

**pH:** Not available.

**Vapor Pressure:** 85 mm Hg @ 20 deg C

**Vapor Density:** 3.0

**Evaporation Rate:** Not available.

**Viscosity:** 0.43 cP@20 deg C

**Boiling Point:** 72-73 deg C

**Freezing/Melting Point:** -93 deg C

**Decomposition Temperature:** Not available.

**Solubility:** Insoluble.

**Specific Gravity/Density:** .9340

**Molecular Formula:** C<sub>4</sub>H<sub>6</sub>O<sub>2</sub>

**Molecular Weight:** 86.0408

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures. Peroxide formation may occur in containers that have been opened and remain in storage. May form explosive peroxides. May polymerize.

**Conditions to Avoid:** Incompatible materials, ignition sources, excess heat, oxidizers.

**Incompatibilities with Other Materials:** Strong acids, ammonia, nitric acid, peroxides, sulfuric acid, aliphatic amines, ozone, oleum, hydrochloric acid, hydrofluoric acid, ethyleneimine, ethylene diamine, nonoxidizing mineral acids, alkanolamines.

**Hazardous Decomposition Products:** Carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** May occur.

## Section 11 - Toxicological Information

### RTECS#:

**CAS#** 108-05-4: AK0875000

### LD50/LC50:

**CAS#** 108-05-4:

Inhalation, mouse: LC50 = 1550 ppm/4H;

Inhalation, rabbit: LC50 = 2500 ppm/4H;

Inhalation, rat: LC50 = 11400 mg/m<sup>3</sup>/4H;

Oral, mouse: LD50 = 1600 mg/kg;

Oral, rat: LD50 = 2900 mg/kg;  
Skin, rabbit: LD50 = 2335 mg/kg;

**Carcinogenicity:**

CAS# 108-05-4:

- **ACGIH:** A3 - Confirmed animal carcinogen with unknown relevance to humans
- **California:** Not listed.
- **NTP:** Not listed.
- **IARC:** Group 2B carcinogen

**Epidemiology:** No information found.

**Teratogenicity:** No information found.

**Reproductive Effects:** In a multigenerational study, vinyl acetate was observed to lower the male fertility index in rats. TDLo=500 mg/kg/D

**Mutagenicity:** Experimental mutation data exists for human lymphocyte cells, hamster embryos, and hamster ovaries.

**Neurotoxicity:** No information found.

**Other Studies:**

## Section 12 - Ecological Information

**Ecotoxicity:** Fish: Fathead Minnow: LC50 = 31.0 mg/L; 96 Hr.; Unspecified Fish: Bluegill/Sunfish: LC50 = 31.0 mg/L; 96 Hr.; Unspecified Fish: Goldfish: LC50 = 31.0 mg/L; 96 Hr.; Unspecified Water flea EC50 = 52.0 mg/L; 24 Hr.; Unspecified No data available.

**Environmental:** Estimated Koc value of 19-59 indicates that significant leaching is possible; however, concurrent hydrolysis should decrease the environmental importance of leaching. Vinyl acetate readily polymerizes; therefore, if vinyl acetate is released to the environment in a spill situation, significant polymerization may occur. Vinyl acetate is chemically degraded in natural water by hydrolysis and reaction with photochemically produced oxidants.

**Physical:** The estimated hydrolysis half-life at 25 deg C and pH 7 is 7.3 days; the hydrolysis rate increases as the pH increases.

**Other:** Based on a water solubility of 20000 ppm at 20 deg C and a log Kow of 0.73, the log BCF of vinyl acetate can be estimated to range from 0.32-0.37 from recommended regression-derived equation.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:** None listed.

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	VINYL ACETATE, STABILIZED	VINYL ACETATE
<b>Hazard Class:</b>	3	3(9.2)
<b>UN Number:</b>	UN1301	UN1301
<b>Packing Group:</b>	II	II
<b>Additional Info:</b>		FLASHPOINT -8C

## Section 15 - Regulatory Information

**US FEDERAL****TSCA**

CAS# 108-05-4 is listed on the TSCA inventory.

**Health & Safety Reporting List**

CAS# 108-05-4: Effective 2/10/86, Sunset 2/10/96

**Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**

None of the chemicals are listed under TSCA Section 12b.

**TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

**CERCLA Hazardous Substances and corresponding RQs**

CAS# 108-05-4: 5000 lb final RQ; 2270 kg final RQ

**SARA Section 302 Extremely Hazardous Substances**

CAS# 108-05-4: 1000 lb TPQ

**SARA Codes**

CAS # 108-05-4: acute, flammable, reactive.

**Section 313**

This chemical is not at a high enough concentration to be reportable under Section 313. No chemicals are reportable under Section 313.

**Clean Air Act:**

CAS# 108-05-4 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**

CAS# 108-05-4 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

**OSHA:**

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

**STATE**

CAS# 108-05-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

**California Prop 65**

California No Significant Risk Level: None of the chemicals in this product are listed.

**European/International Regulations**

**European Labeling in Accordance with EC Directives**

**Hazard Symbols:**

F

**Risk Phrases:**

R 11 Highly flammable.

R 40 Limited evidence of a carcinogenic effect.

**Safety Phrases:**

S 16 Keep away from sources of ignition - No smoking.

S 33 Take precautionary measures against static discharges.

S 9 Keep container in a well-ventilated place.

**WGK (Water Danger/Protection)**

CAS# 108-05-4: 2

**Canada - DSL/NDSL**

CAS# 108-05-4 is listed on Canada's DSL List.

**Canada - WHMIS**

This product has a WHMIS classification of B2, D1B, D2B.

**Canadian Ingredient Disclosure List**

CAS# 108-05-4 is listed on the Canadian Ingredient Disclosure List.

**Section 16 - Additional Information**

**MSDS Creation Date:** 5/19/1999

**Revision #4 Date:** 2/25/2004

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