

Material Safety Data Sheet



Vinyl Acetate

Section 1. Chemical product and company identification

Product Name	: Vinyl Acetate
Supplier	: AIRGAS INC., on behalf of its subsidiaries 259 North Radnor-Chester Road Suite 100 Radnor, PA 19087-5283 1-610-687-5253
Synonym	: acetate de vinyle (french); acetic acid, ethenyl ester; 1-acetoxyethylene; ethenyl acetate; octan winylu (polish); vac; vinile (acetato di) (italian); vinylacetaat (dutch); vinylacetat (german); vinyl acetate; vinyl acetate (dot); vinyl acetate h.q.; vinyl a monomer; vinyle (acetate de) (french); vyac; zeset t; vinyl acetate monomer
Material uses	: Other non specified industry: POLYVINYL ACETATE, POLYVINYL ALCOHOL, POLYVINYL BUTYRAL, AND POLYVINYL CHLORIDE-ACETATE RESINS (Q.V.), USED PARTICULARLY IN LATEX PAINTS; PAPER COATING; ADHESIVES; TEXTILE FINISHING; SAFETY GLASS INTERLAYERS. A VINYL ACETATE-ETHYLENE COPOLYMER IS AVAILABLE FOR SPECIALTY PRODUCTS.
MSDS#	: 001095
Date of Preparation/Revision	: 2/23/2006.
In case of emergency	: 1-866-734-3438

Section 2. Hazards identification

Physical state	: Liquid. (COLORLESS WATERY LIQUID WITH A PLEASANT FRUITY ODOR [NOTE: RAW MATERIAL FOR MANY POLY-VINYL RESINS.]
Emergency overview	: Danger! HIGHLY FLAMMABLE LIQUID AND VAPOR. CAUSES RESPIRATORY TRACT AND EYE IRRITATION. CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA. SUSPECT CANCER HAZARD. MAY CAUSE CANCER. VAPOR MAY CAUSE FLASH FIRE. Avoid contact with eyes. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Risk of cancer depends on duration and level of exposure.
Potential acute health effects	
Eyes	: Irritating to eyes.
Skin	: Practically non-toxic in contact with skin. Slightly irritating to the skin.
Inhalation	: Irritating to respiratory system.
Ingestion	: Practically non-toxic if swallowed.
Potential chronic health effects	: CARCINOGENIC EFFECTS Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC. MUTAGENIC EFFECTS Not available. TERATOGENIC EFFECTS : Not available.
Medical conditions aggravated by overexposure	: Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.
See toxicological Information (section 11)	

Section 3. Composition, Information on Ingredients

United States

vinyl acetate 108-05-4 100

Exposure limits

ACGIH TLV (United States, 1/2005). Notes:
Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124):36338-33351, June 30, 1993, for revised OSHA PEL. Refers to Appendix A -- Carcinogens.

STEL: 53 mg/m³ 15 minute(s). Form: All forms

STEL: 15 ppm 15 minute(s). Form: All forms

TWA: 35 mg/m³ 8 hour(s). Form: All forms

TWA: 10 ppm 8 hour(s). Form: All forms

NIOSH REL (United States, 12/2001).

CEIL: 15 mg/m³ 15 minute(s). Form: All forms

CEIL: 4 ppm 15 minute(s). Form: All forms

Section 4. First aid measures

- Eye contact** : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- Inhalation** : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.
- Ingestion** : Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

Section 5. Fire fighting measures

- Flammability of the product** : Flammable.
- Auto-ignition temperature** : 402.23 to 426.68°C (756 to 800°F)
- Flash point** : Closed cup: -8.15°C (17.3°F).
- Flammable limits** : Lower: 2.6% Upper: 13.4%
- Products of combustion** : These products are carbon oxides (CO, CO₂).
- Fire fighting media and instructions** : In case of fire, use water spray (fog), foam, dry chemicals, or CO₂.

Highly flammable liquid and vapor. Vapor may cause flash fire. Vapors may accumulate in low or confined areas, travel considerable distance to source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

- Special protective equipment for fire-fighters** : Fire fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full facepiece operated in positive pressure mode.

Section 6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Do not touch or walk through spilled material.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal.

Section 7. Handling and storage

- Handling** : Avoid contact with eyes. Keep container closed. Use only with adequate ventilation. Avoid breathing vapor or mist. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Wash thoroughly after handling.
- Storage** : Store in a segregated and approved area. Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8. Exposure Controls, Personal Protection

- Engineering controls** : Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are proximal to the work-station location.
- Personal protection**
- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves or gauntlets complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Personal protection in case of a large spill** : Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

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United States

vinyl acetate

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CEIL: 4 ppm 15 minute(s). Form: All forms

Section 9. Physical and chemical properties

- Physical state** : Liquid. (COLORLESS WATERY LIQUID WITH A PLEASANT FRUITY ODOR [NOTE: RAW MATERIAL FOR MANY POLY-VINYL RESINS.])
- Odor** : NOT UNPLEASANT, SWEET SMELL IN SMALL QUANTITIES; PLEASANT FRUITY; CHARACTER
- Molecular weight** : 86.1 g/mole
- Molecular formula** : C₄H₆O₂
- Boiling/condensation point** : 71.85°C (161.3°F)
- Melting/freezing point** : -93.35°C (-136°F)
- Critical temperature** : 251.9°C (485.4°F)
- Specific gravity** : 0.934 (Water = 1)

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Vapor pressure	: 11.7 kPa (88 mm Hg) (at 20°C)
Vapor density	: 3 (Air = 1)
Evaporation rate	: 8.3

Section 10. Stability and reactivity

Stability and reactivity	: The product is stable.
Incompatibility with various substances	: Highly reactive with oxidizing agents, acids, alkalis, moisture. The product may undergo hazardous decomposition, condensation or polymerization, it may react violently with water to emit toxic gases or it may become self-reactive under conditions of shock or increase in temperature or pressure.

Section 11. Toxicological information

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
vinyl acetate	LD50	2900 mg/kg	Oral	Rat
	LD50	1600 mg/kg	Oral	Mouse
	LD50	2335 mg/kg	Dermal	Rabbit
	LC50	22800 mg/m ³ (1 hour(s))	Inhalation	Rat

Chronic effects on humans : **CARCINOGENIC EFFECTS** Classified A3 (Proven for animal.) by ACGIH, 2B (Possible for human.) by IARC.
Causes damage to the following organs: upper respiratory tract, skin, eye, lens or cornea.

Other toxic effects on humans : No specific information is available in our database regarding the other toxic effects of this material for humans.

Specific effects

Carcinogenic effects	: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenic effects	: No known significant effects or critical hazards.
Reproduction toxicity	: No known significant effects or critical hazards.

Section 12. Ecological information

<u>Ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
vinyl acetate	Pimephales promelas (LC50)	96 hour(s)	14 mg/l
	Pimephales promelas (LC50)	96 hour(s)	15 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	18 mg/l
	Pimephales promelas (LC50)	96 hour(s)	19.73 mg/l
	Pimephales promelas (LC50)	96 hour(s)	20 mg/l
	Pimephales promelas (LC50)	96 hour(s)	23 mg/l

Products of degradation : These products are carbon oxides (CO, CO₂) and water.




Toxicity of the products of biodegradation : The products of degradation are less toxic than the product itself.

Section 13. Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

Section 14. Transport information

Regulatory information	UN number	Proper shipping name	Class	Packing group	Label	Additional information
DOT Classification	UN1301	VINYL ACETATE, STABILIZED	3	II		<p>Reportable quantity 5000 lbs. (2268 kg)</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Passenger Aircraft Quantity limitation: 5 L</p> <p>Cargo Aircraft Quantity limitation: 60 L</p> <p>Special provisions IB2, T4, TP1</p>
TDG Classification	UN1301	VINYL ACETATE, STABILIZED	3	II		<p>Explosive Limit and Limited Quantity Index 1</p> <p>Passenger Carrying Road or Rail Index 5</p>
Mexico Classification	UN1301	VINYL ACETATE, STABILIZED	3	II		<p>Reportable quantity 5000 lbs. (2268 kg)</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Passenger Aircraft Quantity limitation: 5 L</p> <p>Cargo Aircraft Quantity limitation: 60 L</p> <p>Special provisions</p>

Vinyl Acetate						
						IB2, T4, TP1

Section 15. Regulatory information

United States

HCS Classification : Flammable liquid
Irritating material
Carcinogen
Target organ effects

U.S. Federal regulations : TSCA 8(b) inventory: vinyl acetate
SARA 302/304/311/312 extremely hazardous substances: vinyl acetate
SARA 302/304 emergency planning and notification: vinyl acetate
SARA 302/304/311/312 hazardous chemicals: vinyl acetate
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: vinyl acetate: Fire hazard, reactive, Immediate (Acute) Health Hazard, Delayed (Chronic) Health Hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: vinyl acetate
Clean air act (CAA) 112 accidental release prevention: vinyl acetate
Clean air act (CAA) 112 regulated flammable substances: No products were found.
Clean air act (CAA) 112 regulated toxic substances: vinyl acetate

SARA 313

	<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Form R - Reporting requirements	: vinyl acetate	108-05-4	100
Supplier notification	: vinyl acetate	108-05-4	100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations : Pennsylvania RTK: vinyl acetate: (environmental hazard, generic environmental hazard)
Massachusetts RTK: vinyl acetate
New Jersey: vinyl acetate

Canada

WHMIS (Canada) : Class B-2: Flammable liquid with a flash point lower than 37.8°C (100°F).
Class D-1B: Material causing immediate and serious toxic effects (TOXIC).
Class D-2A: Material causing other toxic effects (VERY TOXIC).
Class F: Dangerously reactive material.
CEPA DSL: vinyl acetate

Section 16. Other information

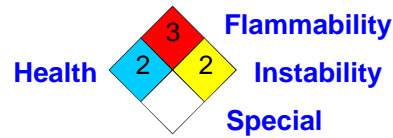
Label Requirements : HIGHLY FLAMMABLE LIQUID AND VAPOR.
CAUSES RESPIRATORY TRACT AND EYE IRRITATION.
CAUSES DAMAGE TO THE FOLLOWING ORGANS: RESPIRATORY TRACT, SKIN, EYE, LENS OR CORNEA.
SUSPECT CANCER HAZARD.
MAY CAUSE CANCER.
VAPOR MAY CAUSE FLASH FIRE.

Hazardous Material Information System (U.S.A.) :

Health	*	2
Fire hazard		3
Reactivity		2
Personal protection		C

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National Fire Protection Association (U.S.A.) :



Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.