

1. PRODUCT NAME: Vinyl Acetate
2. CHEMICAL NAME: Acetic Acid, Ethenyl Ester
3. SYNONYMS:
4. CAS NUMBER: 108-05-4
5. COMPOSITION Acetic Acid, Ethenyl Ester (108-05-4) - 100%

IN CASE OF
TRANSPORT EMERGENCY
CONTACT CHEMTREC
USA: 1-800-424-9300
INTERNATIONAL: 1-703-527-3887

6. PROPERTIES: ODOR & APPEARANCE: clear, colorless liquid with initially fruity, but sharp, irritating, odor.
ODOR THRESHOLD: 0.4 - 0.6ppm Note: sense of smell is rapidly desensitized to this odor.
VAPOUR PRESSURE: approx. 83mmHg/11.1kPa (20 c)
EVAPORATION RATE (butyl Acetate=1): not known - rapid
VAPOR DENSITY (air=1): 3
BOILING RANGE: 73 c/163 F
FREEZING POINT: -93 c/-136 F
SPECIFIC GRAVITY: 0.932 (20/20 c)
WATER SOLUBILITY: 20-24 grams per litre (20 c)
IN OTHER SOLVENTS: soluble in most organic solvents
VISCOSITY: 0.4 centipoise (25 c)
PH: None (does not liberate hydrogen ions when dissolved)
7. HAZARDS: HMIS (USA): Health - 2, Fire - 3, Reactivity - 2
8. FIRE FIGHTING INFORMATION: FLASH POINT: -8 C/18 F (Closed cup)
AUTOIGNITION TEMPERATURE: 385 C/735 F
FLAMMABLE LIMITS: 2.6% - 13.4% not known
COMBUSTION PRODUCTS: carbon monoxide, nitrogen oxides, smoke, part oxidized hydrocarbon fragments
FIREFIGHTING PRECAUTIONS: foam, dry chemical, water fog, water spray only to cool & dilute, product floats on water - water jet spreads flames; firefighters must wear SCBA
STATIC DISCHARGE: may accumulate a static charge
MECHANICAL IMPACT: not sensitive
CHEMICAL STABILITY: can polymerise if heated, exposed to activators, or if inhibitor becomes depleted
REACTIVE WITH: oxidizing agents, alkalis, acids, peroxides can cause violent polymerization; reacts with organic amines; reacts with oxygen above 50 c to form explosive substance; ultraviolet or X - ray radiation may irritate polymerization if inhibitor is depleted; silica gel or alumina dessicants can react vigorously with vapor
DECOMPOSITION PRODUCTS: acetaldehyde and acetic acid
9. PERSONAL PROTECTION MEASURES: HANDS: Teflon, 4H or Barricade gloves recommended consult supplier to confirm suitability
EYES: safety glasses with side shields or chemical goggles always protect the eyes
VENTILATION: mechanical ventilation to maintain air titre below 10ppm; respiratory with organic vapor cartridge required for every employee in area in case ventilation fails; store respirators in air tight containers
CLOTHING: impermeable (hands, above) apron, boots, long sleeves if there is any danger of splashing
10. FIRST AID PROCEDURES: SKIN: Wash with soap and plenty of water. Remove contaminated clothing and do not reuse until thoroughly cleaned or laundered.



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EYES: Wash eyes with plenty of water, holding eyelids open. Seek medical assistance promptly if there is irritation.

INHALATION: Remove from contaminated area promptly. **CAUTION:** Rescuer must not endanger himself! If breathing stops, administer artificial respiration and seek medical aid promptly.

INGESTION: Give plenty of water to dilute product. Do not induce vomiting (NOTE below). Keep victim quiet. If vomiting occurs, lower victims head below hips to prevent inhalation of vomited material. Seek medical help promptly.

NOTE: Inadvertent inhalation of vomited material may seriously damage the lungs. The risk and danger of this is greater than the risk of poisoning through absorption of this relatively low-toxicity product. The stomach should only be emptied under medical supervision, after the installation of an airway to protect the lungs.

11. EXPOSURE TWAEV/TLV ppm/mg/m³: 10/35

LIMITS: LD50 ORAL: 1600

SKIN (mg/kg): 1550

LC50 mg/m³ INHALATION: 2500

NIOSH RECOMMENDATIONS: Recommended Exposure Limit: 15min Ceiling Value: 4ppm (15mg/cu m).

THRESHOLD LIMIT VALUES: 8hr Time Weighted Avg (TWA): 10ppm; 15min Short Term Exposure Limit (STEL): 15ppm. A3; Confirmed animal carcinogen with unknown relevance to humans.

OTHER OCCUPATIONAL PERMISSIBLE LEVELS: The maximum allowable concentrations (MAC-s) for Australia, Belgium, Finland, the Netherlands, Sweden, and Switzerland for vinyl acetate is 10ppm, or 30mg/cu m. The MAC in the USSR, Poland, and Yugoslavia is 10mg/cu m (2.8ppm). The Romanian limits consist of avg and max concn of 50 and 100mg/cu m (14 and 28ppm). Emergency Response Planning Guidelines (ERPG): ERPG (1) 5ppm (no more than mild, transient effects) for up to 1hr exposure; ERPG (2) 75ppm (without serious, adverse effects) for up to 1hr exposure; ERPG (3) 500ppm (not life threatening) up to 1hr exposure.

12. TOXICOLOGICAL EFFECTS ACUTE EXPOSURE

INFORMATION: **SKIN CONTACT:** slight irritation (due to rapid evaporation); if clothing soaked in product contacts skin, severe irritation and blistering can occur.

SKIN ABSORPTION: slight; no toxic effects likely by this route

EYE CONTACT: irritating; appears not to damage eyes; vapor above 6ppm was reported as irritating; reported severe eye irritancy probably caused by inhibitor hydroquinone

INHALATION: vapor above 20ppm irritating, greater exposure may cause (life threatening) pulmonary oedema

INGESTION: symptoms not known - an unlikely route of industrial exposure for an unpleasant smelling and irritating liquid

EFFECTS OF CHRONIC EXPOSURE

GENERAL: prolonged exposure may cause skin cracking, dermatitis and rash, permanent lung damage was reported in one worker following overexposure and bronchitis in other workers exposed to 40ppm for long periods; no effects have been seen in workers after years of exposure to 5-10ppm: liver changes and neurological disorders have been reported in workers exposed to this product, but levels of exposure were not detailed

SENSITISING: not a sensitiser

CARCINOGENIC: although there is no carcinogenic effects, vinyl acetate is metabolized to acetaldehyde, which is carcinogenic in rodent tests; accordingly, the IARC considers this product a suspected carcinogen

REPRODUCTIVE EFFECT: in male rats; no known effect in humans

SYNERGISTIC WITH: not known

LD50: 2900mg/kg (oral, rat), 1600mg/kg (oral, mouse); 2355mg/kg (skin, rabbit)



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LC50: 3250ppm (inhalation, rat), 1550ppm, (inhalation, mouse), 2500ppm (inhalation, rabbit), 6200ppm (inhalation, guinea pig)

13. ECOLOGICAL NE
INFORMATION:

14. DISPOSAL WASTE DISPOSAL: DO NOT FLUSH TO SEWER; may be incinerated in approved facility
CONSIDERAIONS:

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NOTIFICATIONS:

16. TRANSPORT USA 49 CFR
INFORMATION: Product identification number: UN - 1301
Shipping name: vinyl acetate, stabilised
Classification: Class 3; Packing Group II
Label: Class 3, flammable liquid, Class 3
WHMIS Class (Canada): B2, D 1B, D 2A, F

17. HANDLING & Store in a cool, dry environment, away from sources of ignition, heat and oxidizing agents. All electrical
STORAGE: and mechanical equipment used with or around this product should be explosion-proof. Use non-spark-
ing bronze or aluminum hand tools. Use in sealed reactors, or with adequate ventilation to maintain air
concentration below 10ppm. Do not cut, drill, weld or grind on or near this container. Avoid prolonged
contact with skin and wash work clothes frequently. An eye bath and safety shower should be available
near the workplace.

18. ACCIDENTAL LEAK PRECAUTION: dyke to control spillage and prevent environmental contamination. Serious Fire
RELEASE Potential: blanket spill with foam as a precaution against accidental ignition. Take extreme care to avoid
MEASURES: sparks - do not operate (turn on OR off) electrical appliances near spill, unless explosion proof.
HANDLING SPILL: ventilate contaminated area; recover free liquid with suitable pumps; absorb residue
on an inert sorbent, sweep, shovel, & st!
ore in c
losed containers for recycling and disposal.
ENVIROINFO: this product is readily metabolized and cannot accumulate in living tissue. This product
is readily and rapidly biodegradeable in the presence of oxygen; in water, vinyl acetate hydrolyses to acetic
acid and acetaldehyde (half-life of ~7days), both of which are readily and rapidly biodegradeable; estimat-
ed half-life in air due to photolysis is 15 hours, due to reaction with ozone is 4 day.

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ing) up to 1hr exposure.
ATMOSPHERIC STANDARDS: This action promulgates standards of performance for equipment leaks



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of Volatile Organic Compounds (VOC) in the Synthetic Organic Chemical Manufacturing Industry (SOCMI). The intended effect of these standards is to require all newly constructed, modified, and reconstructed SOCMI process units to use the best demonstrated system of continuous emission reduction for equipment leaks of VOC, considering costs, non air quality health and environmental impact and energy requirements. Vinyl acetate is produced, as an intermediate or final product, by process units covered under this subpart. Listed as a hazardous air pollutant (HAP) generally known or suspected to cause serious health problems. The clean Air Act, as amended in 1990, directs EPA to set standards requiring major sources to sharply reduce routine emissions of toxic pollutants. EPA is required to establish and phase in specific performance based standards for all air emission sources that emit one or more of the listed pollutants. Vinyl acetate is included on this list.

STATE DRINKING WATER GUIDELINES: Florida 250ug/l

CLEAN WATER ACT REQUIREMENTS: Designated as a hazardous substance under section 311 (b) (2) (A) of the Federal Water Pollution Control Act and further regulated by the Clean Water Act Amendments of 1977 and 1978. These regulations apply to discharges of this substance.

CERCLA REPORTABLE QUANTITIES: Persons in charge of vessels or facilities are required to notify the National Response Center (NRC) immediately, when there is a release of this designated hazardous substance, in an amount equal to or greater than its reportable quantity of 5000 lb or 2270 kg. The NRC toll free number is (800) 424-8802; In the Washington D.C metropolitan area (202) 426-2675. The rule for determining when notification is required is stated in 40 CFR 302.4. Releases of CERCLA hazardous substances are subject to the release reporting requirement of CERCLA section 103, codified at 40 CFR part 302, in addition to the requirements of 40 CFR part 355. Vinyl Acetate Monomer is an extremely hazardous substance (EHS) subject to reporting requirements when stored in amounts in excess of its threshold planning quantity (TPQ) of 1,000 lbs.

TSCA REQUIREMENTS: Pursuant to section 8(d) of TSCA, EPA promulgated a model Health and Safety Data Reporting rule. The section 8(d) model rule requires manufactures, importers, and processors of listed chemical substances and mixtures to submit to EPA copies and lists of unpublished health and safety studies. Vinyl acetate is included on this list.