

Material Safety Data Sheet

Vinylidene chloride, 99.9%, stabilized with 200 ppm MEHQ

ACC# 76910

Section 1 - Chemical Product and Company Identification

MSDS Name: Vinylidene chloride, 99.9%, stabilized with 200 ppm MEHQ

Catalog Numbers: AC172290000, AC172290010, AC172290025, AC172290250

Synonyms: 1,1-Dichloroethylene; Vinylidene dichloride; 1,1-Dichloroethene; VDC; Vinylidene chloride; asym-Dichloroethylene.

Company Identification:

Acros Organics N.V.

One Reagent Lane

Fair Lawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
75-35-4	Vinylidene chloride	99.9	200-864-0
150-76-5	MEHQ	.02	205-769-8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear, colorless liquid. Flash Point: -19 deg F.

Danger! Air sensitive. Oxidizes readily in air to form unstable peroxides that may explode spontaneously. Extremely flammable liquid and vapor. Vapor may cause flash fire. Harmful if swallowed. Causes respiratory tract irritation. Causes eye and skin irritation. May be harmful if inhaled. May cause central nervous system depression. May cause liver and kidney damage. Keep refrigerated. (Store below 4°C/39°F.) Marine pollutant.

Target Organs: Kidneys, central nervous system, liver, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. Vinylidene chloride is moderately irritating to the eyes. Contact can cause pain, irritation of the eyelids, iritis, and slight corneal injury. Permanent damage is unlikely.

Skin: Causes skin irritation. Prolonged or repeated skin contact may cause severe exacerbation. A single prolonged skin exposure is not likely to result in the material being absorbed in harmful amounts. Vinylidene chloride can be difficult to remove from belts, shoes, watchbands, and other leather items. Chemical burns may result if removal is not complete; therefore, contaminated leather goods should be destroyed.

Ingestion: Harmful if swallowed. Possible aspiration hazard.

Inhalation: May cause liver and kidney damage. Causes irritation of the mucous membrane and upper respiratory tract. Vinylidene chloride is highly volatile. Its odor is not adequate as a warning characteristic. Overexposure produces central nervous system depression. Central nervous system depression, with accompanying symptoms of inebriation that may have progressed to unconsciousness, has been observed in humans acutely exposed at concentrations of approximately 4000 ppm VDC. Complete recovery occurred if exposure was of short duration.

Chronic: May cause liver and kidney damage. Chronic exposure may cause lung damage. Laboratory experiments have resulted in mutagenic effects. Studies indicate vinylidene chloride does not represent a significant cancer risk in humans. Did not cause cancer in most animal studies. Positive findings are believed to be secondary to chronic irritation/tissue injury. Birth defects are unlikely. Exposures having no effect on the mother should have no effect on the fetus. In animal studies, vinylidene chloride has been shown not to interfere with reproduction.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Fire or excessive heat may result in violent rupture of the container due to bulk polymerization. Extremely flammable liquid and vapor. Vapor may cause flash fire. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Fight fire from protected location or maximum possible distance.

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: -19e deg F (-28.33 deg C)

Autoignition Temperature: 1058 deg F (570.00 deg C)

Explosion Limits, Lower:6.5 vol %

Upper: 15.5 vol %

NFPA Rating: (estimated) Health: 2; Flammability: 4; Instability: 2

Section 6 - Accidental Release Measures

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

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. Place under an inert atmosphere. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Handling: Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Handle under an inert atmosphere. Store protected from air. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor or mist. Destroy contaminated leather clothing. Pure vapor will be uninhibited and may polymerize in vents or other confined spaces. Materials of construction recommended for vinylidene chloride monomer include steel, stainless steel, and baked phenolic-lined steel. Recommended gasketing materials include Teflon and Viton fluoroelastomers.

Storage: Keep away from sources of ignition. Do not store in direct sunlight. Store in a tightly closed container. Purge container with nitrogen before resealing. Keep dry. Store in a cool, dry, well-ventilated area away from incompatible substances.

Refrigerator/flammables. Do not expose to air. Do not store in aluminum containers. Long-term storage is not recommended. Do not store in copper or copper alloy storage vessels.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Vinylidene chloride	5 ppm TWA	none listed	none listed
MEHQ	5 mg/m3 TWA	5 mg/m3 TWA	none listed

OSHA Vacated PELs: Vinylidene chloride: 1 ppm TWA; 4 mg/m3 TWA MEHQ: 5 mg/m3 TWA

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

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 respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Appearance: clear, colorless

Odor: sweetish odor - chloroform-like

pH: Not available.

Vapor Pressure: 600 mm Hg @ 25 deg C

Vapor Density: 3.4 (air=1)

Evaporation Rate:Not available.

Viscosity: 0.33 cps @ 20 deg C

Boiling Point: 31.2-31.7 deg C @ 760 mm Hg

Freezing/Melting Point:-122 deg C

Decomposition Temperature:Not available.

Solubility: Insoluble.

Specific Gravity/Density:1.2180 g/cm3

Molecular Formula:C2H2Cl2

Molecular Weight:96.94

Section 10 - Stability and Reactivity

Chemical Stability: Peroxide formation may occur in containers that have been opened and remain in storage. May form explosive peroxides on contact with air or may undergo hazardous polymerization without an inhibitor.

Conditions to Avoid: High temperatures, light, ignition sources, exposure to air, exposure to moist air or water, loss of inhibitor, Water contact produces a polymer..

Incompatibilities with Other Materials: Strong oxidizing agents, strong bases, aluminum, copper, copper alloys, oxygen, ozone,

chlorosulfonic acid, oleum, aluminum alloys.

Hazardous Decomposition Products: Hydrogen chloride, phosgene, carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, formaldehyde, white polymeric powder.

Hazardous Polymerization: May occur.

Section 11 - Toxicological Information

RTECS#:

CAS# 75-35-4: KV9275000

CAS# 150-76-5: SL7700000

LD50/LC50:

CAS# 75-35-4:

Inhalation, rat: LC50 = 6350 ppm/4H;

Inhalation, rat: LC50 = 10000 mg/m3;

Oral, mouse: LD50 = 194 mg/kg;

Oral, rat: LD50 = 200 mg/kg;

CAS# 150-76-5:

Draize test, rabbit, skin: 6 gm/12D (Intermittent) Mild;

Draize test, rabbit, skin: 10%;

Oral, rat: LD50 = 1600 mg/kg;

The adverse effects of VDC exposure are related to its metabolites. Because of the reduced amounts of the epoxide, acyl chloride, and halogenated aldehyde formed in humans compared to that in rodents, humans exposed to similar VDC concentrations are considered to be at substantially lower risk for adverse health effects than rodents.

Carcinogenicity:

CAS# 75-35-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 150-76-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.

Teratogenicity: See actual entry in RTECS for complete information.

Reproductive Effects: See actual entry in RTECS for complete information.

Mutagenicity: DNA Damage: Inhalation, rat = 10 ppm.; Specific Locus Test: Mouse, Lymphocyte = 160 ppm/48H (Continuous).;

Unscheduled DNA Synthesis: Inhalation, mouse = 50 ppm.; Cytogenetic Analysis: Hamster, Lung = 250 mg/L.

Neurotoxicity: No information available.

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: Fish: Fathead Minnow: LC50 = 108 mg/L; 96 Hr; Flow-through bioassay Fish: Bluegill/Sunfish: LC50 = 74 mg/L; 96 Hr; Static bioassay at 21-21°C (pH 6.7-7.8) Algae: Green algae: EC50 > 798 mg/L; 96 Hr; Unspecified Water flea Daphnia: EC50 = 11.6 mg/L; 48 Hr; Static bioassay Fish: Sheepshead minnow: LC50=249 mg/L; ; No data available.

Environmental: Once in the atmosphere it will degrade rapidly by photooxidation with a half-life of 11 hours in relatively clean air or under 2 hours in polluted air. If spilled on land, part of the vinylidene chloride will evaporate and part will leach into the groundwater where its fate is unknown, but degradation is expected to be slow based upon microcosm studies. Vinylidene chloride would not be expected to bioconcentrate into fish.

Physical: No information available.

Other: No information available.

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:

CAS# 75-35-4: waste number U078.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	VINYLLIDENE CHLORIDE, STABILIZED	VINYLLIDENE CHLORIDE STABILIZED
Hazard Class:	3	3
UN Number:	UN1303	UN1303
Packing Group:	I	I
Additional Info:		FLASHPOINT -28 C

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 75-35-4 is listed on the TSCA inventory.
CAS# 150-76-5 is listed on the TSCA inventory.

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

CAS# 75-35-4: Testing required by manufacturers, processors CAS# 150-76-5: Testing required by manufacturers, processors

Section 12b

CAS# 75-35-4: Section 4 CAS# 150-76-5: Section 4

TSCA Significant New Use Rule

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

CERCLA Hazardous Substances and corresponding RQs

CAS# 75-35-4: 100 lb final RQ; 45.4 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 75-35-4: immediate, delayed, fire, reactive.

CAS # 150-76-5: immediate.

Section 313

This material contains Vinylidene chloride (CAS# 75-35-4, 99.9%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 75-35-4 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# 75-35-4 is listed as a Hazardous Substance under the CWA. CAS# 75-35-4 is listed as a Priority Pollutant under the Clean Water Act. CAS# 75-35-4 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

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

STATE

CAS# 75-35-4 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 150-76-5 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:

XN F+

Risk Phrases:

R 12 Extremely flammable.

R 19 May form explosive peroxides.

R 20 Harmful by inhalation.

R 68 Possible risk of irreversible effects.

Safety Phrases:

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

S 29 Do not empty into drains.

S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 75-35-4: 3

CAS# 150-76-5: 1

Canada - DSL/NDSL

CAS# 75-35-4 is listed on Canada's DSL List.

CAS# 150-76-5 is listed on Canada's DSL List.

Canada - WHMIS

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

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List

CAS# 75-35-4 is listed on the Canadian Ingredient Disclosure List.

CAS# 150-76-5 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Additional Information

MSDS Creation Date: 6/18/1999

Revision #6 Date: 10/03/2005

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.