



# MATERIAL SAFETY DATA SHEET

DOW CHEMICAL U.S.A. MIDLAND, MICHIGAN 48674 EMERGENCY (517) • 636 • 4400

Product Code: 91575

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**PRODUCT NAME: VINYL CHLORIDE MONOMER**

Effective Date: 03/20/88 Date Printed: 04/21/88

MSDS:000664

## 1. INGREDIENTS:

Vinyl chloride CAS# 000075-01-4 99.9%

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

## 2. PHYSICAL DATA:

BOILING POINT: -13.83 (+7.11F)  
VAP PRESS: 2524 mmHg, 336 kPa @ 20C  
VAP DENSITY (Air=1): 2.16  
SOL. IN WATER: <0.1 mole % @ 1 atm & 25C  
SP. GRAVITY: 0.913 @ 20/20C, 68F  
APPEARANCE: Extremely flammable, colorless gas or liquid under pressure.  
ODOR: Faint, sweet odor.

## 3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: -78C (-108.4F)  
METHOD USED: COC

FLAMMABLE LIMITS  
LFL: 3.6 vol. %  
UFL: 33.0 vol %

EXTINGUISHING MEDIA: For containment of fire and protection of surrounding equipment only. Water fog, foam, CO2, dry chemical.

FIRE & EXPLOSION HAZARDS: Vapors can form flammable

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### 3. FIRE AND EXPLOSION HAZARD DATA: (CONTINUED)

mixtures with air at all normal ambient temperatures.  
All sources of possible ignition should be avoided in  
areas where vinyl chloride vapors are present.  
Autoignition temperature 472C (882F).

FIRE-FIGHTING EQUIPMENT: Wear positive-pressure, self-contained  
breathing apparatus.

### 4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Avoid exposure to air, oxygen,  
sunlight, moisture, and all sources of heat or ignition.  
Autoignites in air at 472C (882F).

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID) Oxidizing  
material, and aluminum or aluminum alloys.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen chloride, carbon  
monoxide.

HAZARDOUS POLYMERIZATION: May occur. Avoid exposures to  
oxygen (air), heat, sunlight, moisture, and free radical  
initiators or other catalytic impurities.

### 5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Remove all sources of ignition;  
supply ample ventilation, allow only properly protected  
personnel into the area; do not allow vinyl chloride to enter  
the sewer system because of explosive hazard.

DISPOSAL METHOD: Incinerate in equipment with a hydrochloric acid  
scrubber according to local, state, and federal regulations.

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## 5. ENVIRONMENTAL AND DISPOSAL INFORMATION: (CONTINUED)

Contact The Dow Chemical Company for additional help.

## 6. HEALTH HAZARD DATA:

**EYE:** If liquid contacts eye, evaporation may cause frostbite-type injury due to rapid cooling.

**SKIN CONTACT:** If liquid contacts skin, evaporation may cause frost-bite type injury due to rapid cooling.

**SKIN ABSORPTION:** Skin absorption is unlikely due to physical properties.

**INGESTION:** Ingestion is unlikely due to physical state.

**INHALATION:** A single brief (minutes) inhalation exposure to easily attainable concentrations may cause serious adverse effects, even death. Signs and symptoms of excessive exposure at concentrations of 8,000 to 10,000 ppm may be anesthetic or narcotic effects. Signs and symptoms of excessive exposure may be central nervous system effects.

**SYSTEMIC & OTHER EFFECTS:** Excessive exposure may cause lung, liver and kidney effects. Excessive exposure has been shown to cause cancer in humans and in laboratory animals. Repeated excessive exposure may cause Raynaud's Phenomenon, pseudoscleroderma and acroosteolysis in humans. Has been shown to be a mutagen in bacteria. Has been shown to produce reversible chromosomal abnormalities in humans. Vinyl chloride is listed as a carcinogen by The National Toxicology Program, The International Agency for Research, and OSHA.

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### 7. FIRST AID:

EYES: Irrigate immediately with water for at least 5 minutes.

SKIN: No adverse effects anticipated by this route of exposure except for frostbite.

INGESTION: No adverse effects anticipated by this route of exposure due to physical properties.

INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: No specific antidote. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

### 8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE(S): ACGIH TLV is 5 ppm for vinyl chloride. OSHA PEL is 1 ppm for vinyl chloride with a 0.5 ppm action level.

VENTILATION: Control airborne concentrations below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

RESPIRATORY PROTECTION: When airborne exposure guidelines and/or comfort levels may be exceeded, use an approved positive-pressure self-contained breathing apparatus.

SKIN PROTECTION: Use an impervious full slicker suit when there is any possibility of skin contact with liquid or vapors in excess of exposure guidelines.

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**8. HANDLING PRECAUTIONS: (CONTINUED)**

EYE PROTECTION: Use chemical goggles. If vapor exposure causes eye irritation, use a full-face, supplied-air respirator.

**9. ADDITIONAL INFORMATION:**

**REGULATORY REQUIREMENTS:**

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

An immediate health hazard  
A delayed health hazard  
A fire hazard  
A sudden release of pressure hazard

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Storage should be in an isolated, well-ventilated area. Pits, depressions, and basements should be avoided. Avoid all skin and eye contact. Avoid breathing vapors. Vinyl chloride should always be handled with full recognition of its volatility and its flammability. Keep the material enclosed and eliminate all sources of ignition.

MSDS STATUS: Revised Section 9.

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