

MATERIAL SAFETY DATA SHEET

Revised

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS NUMBER : M9192

ISSUE DATE : 09-16-97

PRODUCT NAME : VINYL CHLORIDE (MONOMER)

Manufacturer's Name and Address : Occidental Chemical Corporation, Occidental Tower
5005 LBJ Freeway, P.O. Box 809050
Dallas, TX 75380 (972) 404-3800

24 HOUR EMERGENCY TELEPHONE : 1-800-733-3665 OR 972-404-3228

TO REQUEST AN MSDS : 1-800-699-4970

CUSTOMER SERVICE : 1-800-752-5151

PRODUCT USE : PVC manufacturing

CHEMICAL NAME : Ethylene, Chloro-

CHEMICAL FORMULA : C₂H₃Cl

SYNONYMS/COMMON NAMES : Monochloroethylene
Chloroethene
Ethene, Chloro
VCM

2. COMPOSITION/INFORMATION ON INGREDIENTS

CAS NUMBER / NAME
75-01-4 Ethene, chloro-

EXPOSURE LIMITS
PEL: See 1910.1017
TLV: 5 ppm; 13 mg/m³; TWA, A1

PERCENTAGE
VOL ND
WT 99-100

COMMON NAMES:
MONOCHLOROETHYLENE
VINYL CHLORIDE#
VINYL CHLORIDE MONOMER

OCC 11751

Listed On (List Legend Below):
00 02 06 08 11 15 18 21 22 45 50 51

2. COMPOSITION/INFORMATION ON INGREDIENTS (Continued)

Chemical name used in the SARA Section 313 List of Toxic Chemicals (40 CFR - Section 372.65) if different from CAS name.

LIST LEGEND

00 TSCA INVENTORY	02 SARA TOXIC CHEM, SECTION 313
06 NTP "KNOWN HUMAN CARCINOGEN"	08 IARC HUMAN CARCINOGEN, GROUP 1
11 CA PROP 65 - CARCINOGEN	15 PA SPECIAL & ENV HAZ SUBSTANCE
18 NY HAZARDOUS SUBSTANCES	21 NJ SPECIAL HEALTH HAZ SUB
22 CANADIAN DOMESTIC SUB LIST	45 EPA/OSHA ACCIDENTAL RELEASE
50 PHILIPPINES INVENTORY (PICCS)	51 EINECS

Revised

3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW *****
*
*
* Colorless gas, "sweet odor"

POTENTIAL HEALTH EFFECTS

ROUTES OF ENTRY:

5
Inhalation, Eyes, Skin, Ingestion.

TARGET ORGANS:

14 15 12 9
Kidneys, Liver, Heart, Central Nervous System, and lungs

IRRITANCY:

1121
Liquid, vapors or mist may be irritating to eyes, skin and respiratory tract.

SENSITIZING CAPABILITY:

107
None known.

REPRODUCTIVE EFFECTS:

107
None known. See Section 11

CANCER INFORMATION:

1851
Contains vinyl chloride, a known human carcinogen.

SHORT-TERM EXPOSURE (ACUTE)

OCC 11752

INHALATION:

1435
May cause central nervous system depression at high exposure concentrations.

2187
May also produce the following toxic effects: toxic hepatitis, edema of the brain and lungs, liver, kidney and blood changes.

3. HAZARDS IDENTIFICATION (Continued)

EYES:

61

Contact with cold liquid or gas can produce freeze burns.

SKIN:

61

Contact with cold liquid or gas can produce freeze burns.

INGESTION:

87

Not a likely route of exposure.

REPEATED EXPOSURE (CHRONIC)

116

Prolonged or repeated inhalation or ingestion may result in kidney and liver changes.

SYNERGISTIC MATERIALS:

107

None known.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

152

Pre-existing medical conditions including dermatitis, diseases of the lungs, kidney, liver, heart, nervous system or the blood.

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4. FIRST AID MEASURES

EYES:

157

IMMEDIATELY flush eyes with a directed stream of water for at least 15 minutes, forcibly holding eyelids apart to ensure complete irrigation of all eye and lid tissue. IF IRRITATION PERSISTS GET MEDICAL ATTENTION.

SKIN:

164

For contact with liquid or cold gas; quickly remove victim from source of contamination and flush lukewarm (100-105°) not hot, flowing water until the chemical is removed. DO NOT attempt to re-warm the affected area on site. DO NOT rub area or apply dry heat. Loosely cover with a dry sterile dressing. GET MEDICAL ATTENTION QUICKLY.

INHALATION:

1899

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

179

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Have patient drink several glasses of water then induce vomiting by having patient tickle back of throat with finger. Keep airway clear. GET MEDICAL ATTENTION IMMEDIATELY.

4. FIRST AID MEASURES (Continued)

NOTES TO PHYSICIAN:

2224

There is no specific antidote. Individuals with pre-existing liver, kidney, respiratory, blood and neurological disorders should avoid contact with this material.

Revised

5. FIRE FIGHTING MEASURES

Flash Point: -78°C (-108°F)

Method: TOC

Autoignition Temperature: 882°F

FLAMMABLE LIMITS IN AIR, BY % VOLUME

Upper: 33.0
Lower: 3.6

EXTINGUISHING MEDIA:

206

Dry chemical, carbon dioxide, foam, water fog or spray. Water may be ineffective, but should be used to keep fire-exposed containers cool.

207

If a leak or spill has not ignited, use water spray to disperse the vapors and to protect persons attempting to stop leak.

FIRE FIGHTING PROCEDURES:

1368

Evacuate all unnecessary personnel. Shut down motors, pumps, electrical service and eliminate all sources of ignition. Use water spray to keep fire exposed containers cool to avoid pressure buildup. Wear NIOSH/MSHA approved positive pressure self-contained breathing apparatus and full protective clothing.

FIRE AND EXPLOSION HAZARD:

303

For large cargo fires, evacuate all personnel to at least 1/2 mile in all directions due to danger of exploding vessels. Down wind areas may require additional evacuation due to toxic products of combustion. Do not attempt to extinguish large fires. Evacuate the area and notify the fire department. If possible to do without danger to personnel, containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

SENSITIVITY TO MECHANICAL IMPACT:

107

None known.

OCC 11754

SENSITIVITY TO STATIC DISCHARGE:

248

Avoid build-up of electrostatic charge when handling this material.

Revised

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS:

312

People performing the cleanup should have full protective equipment including a NIOSH/MSHA approved positive pressure self-contained breathing apparatus.

ENVIRONMENTAL PRECAUTIONS:

314

According to 40 CFR 302 Table 302.4 (CERCLA), environmental releases that exceed the RQ must be reported to the National Response Center by calling 800-424-8802 (202-426-2675) and the State Emergency Response Commission and the Local Emergency Planning Committee (40 CFR 355.40) as appropriate.

METHODS FOR CLEANING UP:

1319

Gas will dissipate in ambient air.

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7. HANDLING AND STORAGE

HANDLING:

359

Keep away from sources of ignition. The vapors can travel to an ignition source and flash back causing a flash fire.

SPECIAL MIXING AND HANDLING INSTRUCTIONS:

359

Keep away from sources of ignition. The vapors can travel to an ignition source and flash back causing a flash fire.

STORAGE:

369

Vapors are heavier than air and will tend to collect in low areas. Avoid use in confined spaces. Areas of poor ventilation could contain concentrations high enough to cause unconsciousness and death. Use approved supplied air respirator following manufacturer's recommendations where vapors may be generated.

355

Keep away from heat, sparks, pilot lights, welding operations and open flame.

Revised

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:

99999

There are no standard statements entered for this section.

23A3

8. EXPOSURE CONTROLS/PERSONAL PROTECTION (Continued)

PERSONAL PROTECTION

RESPIRATORY:

468

Avoid breathing vapor. If exposure may or does exceed occupational exposure limits (Sec III) use a NIOSH approved respirator as required to prevent overexposure. In accord with 29 CFR 1910.134, use an atmosphere supplying respirator (air line or self-contained breathing apparatus). No air purifying respirator has been approved for vinyl chloride.

EYE/FACE:

471

Wear chemical safety goggles. (ANSI Z87.1)

SKIN:

1262

Wear chemical resistant gloves such as North Silver Shield , Viton , PVC or nitrile.

OTHER:

494

Emergency shower and eyewash facility should be in close proximity (ANSI Z358.1).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Colorless gas, "sweet odor"

Odor Threshold: Not available

Specific Gravity (Water=1): 0.91 @ 25°C/25°C

Vapor Pressure: 1,210 mm Hg @ 20°C

Vapor Density (Air=1): 2.15

Density: Not available

Evaporation Rate: >15

% Volatiles by Wt: 100

Boiling Point: 7°F

Freezing Point: Not available

Melting Point: -245°F

Solubility in Water (% by wt.): Slight

pH: Not determined

Octanol/Water Partition Coefficient: Not available

Thermal Decomposition Temperature: Not available

OCC 11756

9. PHYSICAL AND CHEMICAL PROPERTIES (Continued)

Other: This material is a gas at atmospheric pressure and room temperature.

VOC (g/l. by wt.): Not applicable

Revised

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY:

 STABLE X UNSTABLE

REACTS WITH:

<u> X </u> AIR	<u> X </u> OXIDIZERS	<u> X </u> METALS
<u> </u> WATER	<u> </u> ACIDS	<u> </u> OTHER
<u> X </u> HEAT	<u> </u> ALKALIS	<u> </u> NONE

HAZARDOUS POLYMERIZATION:

 X OCCURS WILL NOT OCCUR

COMMENTS:

99999

There are no standard statements entered for this section.

HAZARDOUS DECOMPOSITION PRODUCTS:

1290

Incomplete combustion can generate phosgene, hydrogen chloride, and other toxic vapors.

11. TOXICOLOGICAL INFORMATION

743

75-01-4 Ethene, chloro-

ACUTE ORAL LD50 : (rat) 500 mg/kg

ACUTE INHALATION LC50 : (rat) 150,000 mg/kg

Vinyl chloride has been demonstrated to be mutagenic in cultured cell tests, insects, and laboratory animals. It is also listed as a human carcinogen by OSHA, IARC (Group 1) and NTP. Long term exposure to vinyl chloride has caused liver and other cancers in animals and humans. At high concentrations vinyl chloride can cause central nervous depression, affect heart rhythms, and cause liver and kidney damage. Prolonged and repeated exposure may result in changes in the blood system and loss of bone from finger tips.

12. ECOLOGICAL INFORMATION

There are no standard statements entered for this section.

No Ecological Data Available.

OCC 11757

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13. DISPOSAL CONSIDERATIONS

856

Dispose of all waste and contaminated equipment in accordance with all applicable federal, state and local health and environmental regulations.

14. TRANSPORT INFORMATION

DOT PROPER SHIPPING NAME: Vinyl Chloride, Stabilized

DOT HAZARD CLASS: 2.1

DOT IDENTIFICATION NUMBER: UN1086

DOT PACKING GROUP: Not Applicable

DOT HAZARDOUS SUBSTANCE(S): RQ 1 Lb. (Vinyl Chloride)

DOT MARINE POLLUTANT(S): Not Applicable

ADDITIONAL DESCRIPTION REQUIREMENT: Not Applicable

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

880

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372. See Section 2, List Legend 02.

877

OSHA Standard 29 CFR 1910.1200 requires that information be provided to employees regarding the hazards of chemicals by means of a hazard communication program including labeling, material safety data sheets, training and access to written records. We request that you, and it is your legal duty to, make all information in this Material Safety Data Sheet available to your employees.

879

To aid our customers in complying with regulatory requirements, SARA Title III Hazard Categories for this product are indicated below. If the word "YES" appears next to any category, this product may be reportable by you under the requirements of 40.CFR.370. Please consult those regulations for details.

TSCA:

OCC 11758

SARA/TITLE III HAZARD CATEGORIES:

Immediate (Acute) Health:	<u>YES</u>	Reactive Hazard	<u>YES</u>
Delayed (Chronic) Health:	<u>YES</u>	Sudden Release of Pressure	<u>YES</u>
Fire Hazard:	<u>YES</u>		

HMIS HAZARD RATINGS:

HEALTH HAZARD: 3* FIRE HAZARD: 4 REACTIVITY: 2

15. REGULATORY INFORMATION (Continued)

STATE REGULATIONS:

888

State of California Safe Drinking Water ?

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17. WARNING LABEL INFORMATION (Continued)

INHALATION:

1899

Remove to fresh air. If breathing is difficult, have trained person administer oxygen. If respiration stops, have a trained person administer artificial respiration. GET MEDICAL ATTENTION IMMEDIATELY.

INGESTION:

179

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. Have patient drink several glasses of water then induce vomiting by having patient tickle back of throat with finger. Keep airway clear. GET MEDICAL ATTENTION IMMEDIATELY.

IN CASE OF SPILL OR LEAK:

99999

There are no standard statements entered for this section.

FIRE:

99999

There are no standard statements entered for this section.

HANDLING AND STORAGE:

99999

There are no standard statements entered for this section.

DISPOSAL:

99999

There are no standard statements entered for this section.

INFORMATION REQUIRED BY FEDERAL, STATE OR LOCAL REGULATIONS:

This Product Contains:

CAS#	NAME
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75-01-4	Ethene, chloro
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HMIS RATING: HEALTH 3* FLAMMABILITY 4 REACTIVITY 2

LABEL NUMBER: 110M9192

1110

For Industrial Use Only