Guidechem Chemical Network - Chemical Manufacturers,suppliers, B2B Marketplace (guidechem.com)

# SIGMA-ALDRICH

## Material Safety Data Sheet

Version 3.0
Revision Date 08/21/2009
Print Date 07/15/2010

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 1,1-Dichloroethene

Product Number : 48526
Brand : Supelco

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +18003255832
Fax : +18003255052
Emergency Phone # : (314) 776-6555

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 1,1-Dichloroethylene
Vinylidene chloride

Formula : $C_2H_2Cl_2$
Molecular Weight : 96.94 g/mol

| CAS-No. | EC-No. | Index-No. | Concentration |
|---|---|---|---|
| **Vinylidene chloride** | | | |
| 75-35-4 | 200-864-0 | 602-025-00-8 | - |

### 3. HAZARDS IDENTIFICATION

**Emergency Overview**

**OSHA Hazards**
Flammable Liquid, Target Organ Effect, Toxic by ingestion, Irritant

**Target Organs**

Liver, Kidney, Central nervous system

**HMIS Classification**
**Health Hazard**: 2
**Chronic Health Hazard**: *
**Flammability**: 4
**Physical hazards**: 2

**NFPA Rating**
**Health Hazard**: 2
**Fire**: 4
**Reactivity Hazard**: 0

**Potential Health Effects**

| | |
|---|---|
| **Inhalation** | May be harmful if inhaled. Causes respiratory tract irritation. |
| **Skin** | May be harmful if absorbed through skin. Causes skin irritation. |
| **Eyes** | Causes eye irritation. |
| **Ingestion** | Toxic if swallowed. |

## 4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area.

**If inhaled**
If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

**Flammable properties**

| | |
|---|---|
| Flash point | -25.0 °C (-13.0 °F) - closed cup |
| Ignition temperature | 520 °C (968 °F) |

**Suitable extinguishing media**
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

**Special protective equipment for fire-fighters**
Wear self contained breathing apparatus for fire fighting if necessary.

**Further information**
Use water spray to cool unopened containers.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up**
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

## 7. HANDLING AND STORAGE

**Handling**
Avoid inhalation of vapour or mist.
Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. Use explosion-proof equipment.

**Storage**
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

Recommended storage temperature: 2 - 8 °C

Air and moisture sensitive. Store under inert gas.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Components with workplace control parameters**

| Components | CAS-No. | Value | Control parameters | Update | Basis |
|---|---|---|---|---|---|
| Vinylidene chloride | 75-35-4 | TWA | 5 ppm | 2007-01-01 | USA. ACGIH Threshold Limit Values (TLV) |
| Remarks | Liver & kidney damage Not classifiable as a human carcinogen: Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories. | | | | |
| | | TWA | 1 ppm<br>4 mg/m3 | 1989-01-19 | USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000 |

**Personal protective equipment**

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**
Handle with gloves.

**Eye protection**
Face shield and safety glasses

**Skin and body protection**
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

| | |
|---|---|
| Form | liquid, clear |
| Colour | colourless |

**Safety data**

| | |
|---|---|
| pH | no data available |
| Melting point | -122 °C (-188 °F) - lit. |

| | |
|---|---|
| Boiling point | 30 - 32 °C (86 - 90 °F) - lit. |
| Flash point | -25.0 °C (-13.0 °F) - closed cup |
| Ignition temperature | 520 °C (968 °F) |
| Lower explosion limit | 6.5 %(V) |
| Upper explosion limit | 15.5 %(V) |
| Vapour pressure | 658.6 hPa (494.0 mmHg)<br>667.3 hPa (500.5 mmHg) at 20.0 °C (68.0 °F)<br>2,137.4 hPa (1,603.2 mmHg) at 55.0 °C (131.0 °F) |
| Density | 1.213 g/mL at 20 °C (68 °F) |
| Water solubility | 0.2 g/l at 20 °C (68 °F) |

## 10. STABILITY AND REACTIVITY

**Storage stability**
Stable under recommended storage conditions.

**Conditions to avoid**
Heat, flames and sparks.

**Materials to avoid**
Oxidizing agents, Copper, Aluminum, and its alloys, Peroxides, Strong bases, Oxygen

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

**Hazardous reactions**
Vapours may form explosive mixture with air.

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

LD50 Oral - rat - 200.0 mg/kg

LC50 Inhalation - rat - 4 h - 6350 ppm
Remarks: Behavioral:Coma.

**Irritation and corrosion**

no data available

**Sensitisation**

no data available

**Chronic exposure**

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

| | |
|---|---|
| IARC: | 3 - Group 3: Not classifiable as to its carcinogenicity to humans (Vinylidene chloride) |
| NTP: | No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP. |
| OSHA: | No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA. |

Laboratory experiments have shown mutagenic effects.

**Signs and Symptoms of Exposure**

Nausea, Headache, Vomiting, Dizziness, Drowsiness, Confusion., Incoordination., Central nervous system depression, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Potential Health Effects**

| | |
|---|---|
| **Inhalation** | May be harmful if inhaled. Causes respiratory tract irritation. |
| **Skin** | May be harmful if absorbed through skin. Causes skin irritation. |
| **Eyes** | Causes eye irritation. |
| **Ingestion** | Toxic if swallowed. |
| **Target Organs** | Liver, Kidney, Central nervous system, |

**Additional Information**
RTECS: KV9275000

## 12. ECOLOGICAL INFORMATION

**Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

| | |
|---|---|
| Toxicity to fish | LC50 - Daphnia magna (Water flea) - 11.60 - 11.79 mg/l |
| | LC50 - Pimephales promelas (fathead minnow) - 108.00 - 169.00 mg/l |
| | LC50 - Lepomis macrochirus (Bluegill) - 74.00 - 220.00 mg/l |
| | LC50 - Cyprinodon variegatus (sheepshead minnow) - 249.00 mg/l |
| | LC50 - other fish - 250.00 mg/l |
| | LC50 - other fish - 224.00 mg/l |
| | LC50 - Pimephales promelas (fathead minnow) - 108 mg/l - 96 h |
| | NOEC - Cyprinodon variegatus (sheepshead minnow) - 80 mg/l - 96 h |
| Toxicity to daphnia and other aquatic invertebrates. | LC50 - Daphnia magna (Water flea) - 11.6 mg/l - 48 h |

**Further information on ecology**

no data available

## 13. DISPOSAL CONSIDERATIONS

**Product**
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging**
Dispose of as unused product.

## 14. TRANSPORT INFORMATION

**DOT (US)**
UN-Number: 1303 Class: 3 Packing group: I

Proper shipping name: Vinylidene chloride, stabilized
Marine pollutant: Marine pollutant
Poison Inhalation Hazard: No

**IMDG**
UN-Number: 1303 Class: 3 Packing group: I EMS-No: F-E, S-D
Proper shipping name: VINYLIDENE CHLORIDE, STABILIZED
Marine pollutant: Marine pollutant

**IATA**
UN-Number: 1303 Class: 3 Packing group: I
Proper shipping name: Vinylidene chloride, stabilized

## 15. REGULATORY INFORMATION

**OSHA Hazards**
Flammable Liquid, Target Organ Effect, Toxic by ingestion, Irritant

**DSL Status**
All components of this product are on the Canadian DSL list.

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

| | CAS-No. | Revision Date |
|---|---|---|
| Vinylidene chloride | 75-35-4 | 2007-07-01 |

**SARA 311/312 Hazards**
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| Vinylidene chloride | 75-35-4 | 2007-07-01 |

**Pennsylvania Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| Vinylidene chloride | 75-35-4 | 2007-07-01 |

**New Jersey Right To Know Components**

| | CAS-No. | Revision Date |
|---|---|---|
| Vinylidene chloride | 75-35-4 | 2007-07-01 |

**California Prop. 65 Components**
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

## 16. OTHER INFORMATION

**Further information**
Copyright 2009 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.