

1,2-DICHLOROETHANE

0250

March 1995

CAS No: 107-06-2
RTECS No: KI0525000
UN No: 1184
EC No: 602-012-00-7

Ethylene dichloride
1,2-Ethylene dichloride
Ethane dichloride
 $\text{ClCH}_2\text{CH}_2\text{Cl}$ / $\text{C}_2\text{H}_4\text{Cl}_2$
Molecular mass: 98.96

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Highly flammable. Gives off irritating or toxic fumes (or gases) in a fire.	NO open flames, NO sparks, and NO smoking.	Water spray, foam, powder, carbon dioxide.
EXPLOSION	Vapour/air mixtures are explosive.	Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding). Do NOT use compressed air for filling, discharging, or handling.	In case of fire: keep drums, etc., cool by spraying with water.

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Abdominal pain. Cough. Dizziness. Drowsiness. Headache. Nausea. Sore throat. Unconsciousness. Vomiting. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
Skin	Redness.	Protective gloves.	Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention.
Eyes	Redness. Pain. Blurred vision.	Safety goggles face shield or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
Ingestion	Abdominal cramps. Diarrhoea. (Further see Inhalation).	Do not eat, drink, or smoke during work. Wash hands before eating.	Give nothing to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. Do NOT wash away into sewer. Personal protection: self-contained breathing apparatus.	F Symbol T Symbol R: 45-11-22-36/37/38 S: 53-45 Note: E UN Hazard Class: 3 UN Subsidiary Risks: 6.1 UN Pack Group: II Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs. Marine pollutant.

EMERGENCY RESPONSE	SAFE STORAGE
Transport Emergency Card: TEC (R)-30GTF1-II NFPA Code: H 2; F 3; R 0	Fireproof. Separated from strong oxidants, food and feedstuffs, and other incompatible materials. See Chemical Dangers. Cool. Dry.

IPCS

International
Programme on
Chemical Safety



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SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS VISCOUS LIQUID, WITH CHARACTERISTIC ODOUR. TURNS DARK ON EXPOSURE TO AIR, MOISTURE AND LIGHT.

Physical dangers

The vapour is heavier than air and may travel along the ground; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated.

Chemical dangers

The substance decomposes on heating and on burning producing toxic and corrosive fumes including hydrogen chloride (ICSC 0163) and phosgene (ICSC 0007). Reacts violently with aluminium, alkali metals, alkali amides, ammonia, bases, strong oxidants. Attacks many metals in presence of water. Attacks plastic.

Occupational exposure limits

TLV: 10 ppm as TWA; A4 (not classifiable as a human carcinogen); (ACGIH 2004).
MAK: skin absorption (H); Carcinogen category: 2; (DFG 2004).

Routes of exposure

The substance can be absorbed into the body by inhalation of its vapour, through the skin and by ingestion.

Inhalation risk

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20/C.

Effects of short-term exposure

The vapour is irritating to the eyes, the skin and the respiratory tract. Inhalation of the vapour may cause lung oedema (see Notes). The substance may cause effects on the central nervous system, kidneys, liver, resulting in impaired functions.

Effects of long-term or repeated exposure

Repeated or prolonged contact with skin may cause dermatitis. This substance is probably carcinogenic to humans.

PHYSICAL PROPERTIES

Boiling point: 83.5/C
Melting point: -35.7/C
Relative density (water = 1): 1.235
Solubility in water, g/100 ml: 0.87
Vapour pressure, kPa at 20/C: 8.7
Relative vapour density (air = 1): 3.42

Relative density of the vapour/air-mixture at 20/C (air = 1): 1.2
Flash point: 13/C c.c.
Auto-ignition temperature: 413/C
Explosive limits, vol% in air: 6.2-16
Octanol/water partition coefficient as log Pow: 1.48

ENVIRONMENTAL DATA

NOTES

Depending on the degree of exposure, periodic medical examination is suggested. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential. Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered. Card has been partly updated in October 2005. See sections Occupational Exposure Limits, Emergency Response.

ADDITIONAL INFORMATION

LEGAL NOTICE

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