1,1,2,2-TETRACHLOROETHANE

0332
April 2005

CAS No: 79-34-5
RTECS No: KI8575000
UN No: 1702
EC No: 602-015-00-3

Acetylene tetrachloride
sym-Tetrachloroethane
1,1-Dichloro-2-2,dichloroethane
$C_2H_2Cl_4$ / $CHCl_2CHCl_2$
Molecular mass: 167.9

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: use appropriate extinguishing media.
EXPLOSION			
EXPOSURE		**STRICT HYGIENE!**	**IN ALL CASES CONSULT A DOCTOR!**
Inhalation	Abdominal pain. Cough. Sore throat. Headache. Nausea. Vomiting. Dizziness. Drowsiness. Confusion. Tremor. Convulsions.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.
Skin	MAY BE ABSORBED! Redness. Dry skin. (Further see Inhalation).	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Redness. Pain.	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 pain. Nausea. Vomiting. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Induce vomiting (ONLY IN CONSCIOUS PERSONS!). Rest. Refer for medical attention.

SPILLAGE DISPOSAL

Personal protection: complete protective clothing including self-contained breathing apparatus. Ventilation. Do NOT let this chemical enter the environment. 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.

PACKAGING & LABELLING

EU classification
T+ Symbol
N Symbol
R: 26/27-51/53
S: (1/2-)38-45-61
UN classification
UN Hazard Class: 6.1
UN Pack Group: II

Do not transport with food and feedstuffs. Marine pollutant.

EMERGENCY RESPONSE

Transport Emergency Card: TEC (R)-61S1702 or 61GT1-II

SAFE STORAGE

Store in an area without drain or sewer access. Separated from strong bases, alkali metals, food and feedstuffs. Cool. Keep in the dark. Well closed. Keep in a well-ventilated room.

IPCS
International Programme on Chemical Safety

Prepared in the context of cooperation between the International Programme on Chemical Safety and the European Commission

SEE IMPORTANT INFORMATION ON THE BACK.

IMPORTANT DATA

Physical State; Appearance
COLOURLESS LIQUID, WITH CHARACTERISTIC ODOUR.

Physical dangers
The vapour is heavier than air.

Chemical dangers
The substance decomposes on heating and under influence of air, UV light and moisture producing toxic and corrosive gases including hydrogen chloride, phosgene. Reacts violently with alkali metals, strong bases and powdered metals producing toxic and corrosive gases. Attacks plastic and rubber.

Occupational exposure limits
TLV: 1 ppm as TWA; (skin); A3 (confirmed animal carcinogen with unknown relevance to humans); (ACGIH 2005).
MAK: 1 ppm, 7.0 mg/m^3 Peak limitation category: II(2); skin absorption (H); Carcinogen category: 3B; Pregnancy risk group: D; (DFG 2006).

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 rather quickly on evaporation of this substance at 20/C.

Effects of short-term exposure
The substance is irritating to the eyes, the skin and the respiratory tract. The substance may cause effects on the central nervous system, liver and kidneys, resulting in central nervous system depression and impaired functions. Exposure may result in unconsciousness. Exposure may result in death.

Effects of long-term or repeated exposure
The liquid defats the skin. The substance may have effects on the central nervous system and liver, resulting in impaired functions.

PHYSICAL PROPERTIES

Boiling point: 146/C
Melting point: -44/C
Relative density (water = 1): 1.59
Solubility in water, g/100 ml at 20/C: 0.29
Vapour pressure, Pa at 20/C: 647
Relative vapour density (air = 1): 5.8
Relative density of the vapour/air-mixture at 20/C (air = 1): 1.03
Octanol/water partition coefficient as log Pow: 2.39

ENVIRONMENTAL DATA

The substance is toxic to aquatic organisms.

NOTES

Use of alcoholic beverages enhances the harmful effect.
The odour warning when the exposure limit value is exceeded is insufficient.
Do NOT use in the vicinity of a fire or a hot surface, or during welding.
Card has been partly updated in October 2005. See section Storage.
Card has been partially updated in July 2007: see Occupational Exposure Limits.

ADDITIONAL INFORMATION