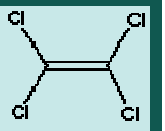
PERCHLOROETHYLENE

PRODUCT IDENTIFICATION



CAS NO	127-18-4
EINECS NO.	204-825-9
FORMULA	$Cl_2C=CCl_2$
MOL WT.	165.83
H.S. CODE	2903.23
TOXICITY	Oral rat LD50: 2629 mg/kg
SYNONYMS	Tetrachloroethene; 1,1,2,2-Tetrachloroethylene; Ethylene Tetrachloride; Dowper; Perclene; Nema; Tetracap; Tetropil; Ankilostin; Didakene; Carbon Dichloride; Perchlor; Antisol 1; Fedal-un; Perawin; Perclene d; Percosolve; Perklone; Persec; Tetlen; Tetraleno; Tetralex; tetravec; Tetroguer; Tetrochloroethane; Tetrachloroethylene; Czterochloroetylen (Polish); Perchloorethyleen (Dutch); Perchloraethylen, ; Perchlorethylene (French); Percloroetilene (Italian); Tetrachlooretheen (Dutch); Tetrachloraethen (German); Tetracloroetene (Italian); PER;
DERIVATION	
CLASSIFICATION	

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Colorless liquid with an ether or chloroform like odor
MELTING POINT	-22 C
BOILING POINT	121 C
SPECIFIC GRAVITY	1.623
SOLUBILITY IN WATER	Nearly insoluble
pH	
VAPOR DENSITY	5.2
AUTOIGNITION	
NFPA RATINGS	Health: 2; Flammability: 0; Reactivity: 0
REFRACTIVE INDEX	1.5049
FLASH POINT	None
STABILITY	Stable under ordinary conditions but may be slowly decomposed by light and prolonged storage

GENERAL DESCRIPTION & APPLICATIONS

Perchloroethylene (also called Tetrachloroethylene) is a clear colourless, dense liquid with a distinctive, somewhat ether-like odour. It is non flammable highly stable, having no measurable flash point or flammable limits in air, belonging to the family of organic halogen compounds. This chemical is oxidized by strong oxidizing agents like sulfuric acid, nitric acid and sulfur trioxide but incompatible with strong bases. It reacts violently with barium, beryllium lithium, dinitrogen tetraoxide and aluminum. Perchloroethylene does not occur naturally but is a manufactured chemical mainly by oxyhydrochlorination, perchlorination, or dehydrochlorination of hydrocarbons or chlorinated hydrocarbons. It's broad applications are based upon its nonflammability and low toxicity. It is the most widely used solvent in dry cleaning displacing carbon tetrachloride and trichloroethylene and also used for cleaning metals and certain other solids in vapour-degreasing apparatuses. It is used as a solvent for fats, greases, waxes, rubbers, gums and caffeine from coffee. It is also used for processing textiles, as an anthelminthic against ancylostoma, necator, nematodes and trematodes in veterinary medicines, a heat-exchange fluid and in copying machines. This compound is used as an intermediate to manufacture trichloroacetic acid, fluorocarbons, paint removers and in printing inks. Small quantities are employed as a vermifuge.

SALES SPECIFICATION

APPEARANCE	Colorless liquid with an ether or chloroform like odor
PURITY	99.8% min
ORGANIC IMPURITIES	0.1% max
MOISTURE	0.003% max
STABILIZER RANGE	0.002% max
BOILING POINT	120 C min
COLOR, HAZEN	15 max

TRANSPORTATION

PACKING	350kgs in drum
HAZARD CLASS	6.1 (Packing group: III)
UN NO.	1897

OTHER INFORMATION

European Hazard Symbols: XN N, Risk Phrases: 40-51/53, Safety Phrases: 23-36/37-61

CHLORINATED SOLVENTS

COMPOUND	CAS #	FORMULA (MOL WT.)	BOILING POINT C	DENSITY	VAPOR DENSITY
Methyl chloride	74-87-3	CH_3Cl (50.49)	-24.2	0.915	1.74
Methylene chloride	75-09-2	CH_2Cl_2 (84.93)	39.8	1.3	2.9
Chloroacetic Acid	79-11-8	$ClCH_2COOH$ (94.50)	188	1.58	3.3
1,1-Dichloroethene	75-35-4	$CH_2=CCl_2$ (96.94)	31.7	1.213	3.4
1,2-Dichloroethylene (isomer mixture)	540-59-0	$ClCH=CHCl$ (96.94)	48 - 60	1.3	3.4
1,1-Dichloroethane	75-34-3	CH_3CHCl_2 (98.96)	57.3	1.2	3.4
Ethylene dichloride	107-06-2	$ClCH_2CH_2Cl$ (98.96)	83.5	1.2	3.4
Chloroacetic Chloride	79-04-9	$ClCH_2COCl$ (112.94)	105	1.42	3.9
1,2-Dichloropropane	78-87-5	$CH_3CHClCH_2Cl$ (112.99)	96.8	1.2	3.9
Chloroform (Trichloromethane)	67-66-3	$CHCl_3$ (119.38)	61.7	1.5	4.1
Trichloroethylene	79-01-6	$ClCH=CCl_2$ (131.39)	86.7	1.5	4.5
1,1,1-Trichloroethane (Methyl Chloroform)	71-55-6	Cl_3CCH_3 (133.40)	74.1	1.3	4.6
1,1,2-Trichloroethane	79-00-5	$ClCH_2CHCl_2$ (133.40)	113.8	1.4	4.6
1,2,3-Trichloropropane	96-18-4	$CH_2ClCHClCH_2Cl$ (147.43)	156	1.4	5.1
Carbon Tetrachloride	56-23-5	CCl_4 (153.82)	76.7	1.6	5.3
1,1,2,2-Tetrachloroethylene	127-18-4	$CCl_2=CCl_2$ (165.83)	121.1	1.6	5.8
1,1,2,2-Tetrachloroethane	79-34-5	$CHCl_2CHCl_2$ (167.85)	146.3	1.6	5.8

The production and use of 1,1,1-trichloroethane and carbon tetrachloride have been phased out throughout the world because of suspected harm to the earth's ozone layer.