TRICHLOROETHYLENE

PRODUCT IDENTIFICATION

CAS NO 79-01-6
EINECS NO. 201-167-4
FORMULA CICH=CCl₂
MOL WT. 131.39
H.S. CODE 2903.22

TOXICITY Oral rat LD50: 5650 mg/kg

SYNONYMS Trichloroethene; TCE; Acetylene trichloride;

Ethinyl trichloride; 1,1,2-Trichlorethylene; 1,1-Dichloro-2-chloroethylene; 1,2,2-Trichloroethylene; 1-Chloro-2,2-dichloroethylene; Benzinol; Blacosolv; Blancosolv; Chlorilen; Chlorylen; Circosolv; Ethylene trichloride; Threthylene; Trichloraethen; Trichloraethen (German); Trichloraethylen, tri (German); Trichloran; Trichlorethene (French); Trichlorethylene, tri (French); Tricloretene (Italian); Tricloroetilene (Italian);

DERIVATION chlorination of ethylene or ethylene dichloride

CLASSIFICATION

GENERAL DESCRIPTION

Trichloroethylene is a heavy, stable, toxic, nonflammable liquid with a chloroform aroma; boiling at 87 C; slightly soluble in water, soluble with greases and common organic solvents; Trichloroethylene is prepared by the chlorination of ethylene or ethylene dichloride. Because of concerns about its toxicity, the use is declining. It is prohibited to use in food, drugs and cosmetics. It is now mainly used in vapor degreasing of fabricated or assembling metal parts. It is also used as an industrial solvent in extraction processes, as a diluent in paints and adhesives, in textile processing, and other ways. It is used as a chain terminator for PVC production. It is also used as a refrigerant, as a heat exchange liquid, as a chemical intermediate or raw material in the production of chloroacetic acid, pesticides, gums, resins, tars, paints and varnishes. It is used in dry cleaning operations.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Clear, colorless liquid with mild chloroform-like odor

MELTING POINT -73 C
BOILING POINT 85 - 87 C
SPECIFIC GRAVITY 1.463

SOLUBILITY IN WATER slightly soluble

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VAPOR DENSITY 4.5
AUTOIGNITION 414 C

NFPA RATINGS Health: 2 Flammability: 1 Reactivity: 0

REFRACTIVE INDEX 1.4760 FLASH POINT None

STABILITY Stable under ordinary conditions

APPLICATIONS

vapor degreasing of fabricated or assembling metal parts; as a solvent in other ways; chemical intermediate;

SALES SPECIFICATION

| APPEARANCE | clear liquid |
|---------------------|----------------------|
| SPECIFIC GRAVITY | 1.45 - 146 |
| ACIDITY | 0.2% max |
| NONVOLATILES | 20ppm |
| DISTILLATION REANGE | 86 - 88 C (IBP - DP) |
| WATER | 0.1% max |
| FREE CHLORINE | Not detected |
| COLOR (APHA) | 15 max |

TRANSPORTATION

PACKING 300kgs in Drum

HAZARD CLASS 6.1 (Packing Group: III)

UN NO. 1710

OTHER INFORMATION

European Hazard Symbols: XN, Risk Phrases: 40/52/53, Safety Phrases: 23/36/37/61