



>>Entry Name: 1,1-Dichloroethylene, 8Cl

Synonym(s): 1,1-Dichloroethene, 9Cl. Vinylidene chloride. R 1130a

CAS Registry Number: 75-35-4

Extra CAS Registry Numbers(s): 25323-30-2

$\text{H}_2\text{C}=\text{CCl}_2$

Molecular Formula: $\text{C}_2\text{H}_2\text{Cl}_2$

Molecular Weight: 96.943

Accurate Mass: 95.953354

Percentage Composition: C 24.78%; H 2.08%; Cl 73.14%

Source/Synthesis: Manuf. by dehydrochlorination of 1,1,1-Trichloroethane [CTF38-M](#)

Use/Importance: Intermediate in production of plastics as comonomer with vinyl chloride, acrylonitrile, acrylates etc. Reacts with alcohols and halides to give carboxylic acids. Important industrial chemical, 15th in order of volume for USA in 1990 (production 6.65 million tons/year)

Physical Description: Volatile liq. with a sweet smell

Melting Point: Fp -122.5°

Boiling Point: Bp 31.7° (37°)

Solubility: Insol. H_2O ; sol. EtOH, Et_2O , Me_2CO , CHCl_3

Density: d^{20}_4 1.218

Refractive Index: n^{20}_D 1.4249

Other Data: V. susceptible to oxidn. and polym. Coml. samples contain an inhibitor. Polym. by both ionic and radical mechanisms. Rates for radical polym., k_p $8.6 \text{ L mol}^{-1} \text{ s}^{-1}$, k_t $1.75 \times 10^{-7} \text{ L mol}^{-1} \text{ s}^{-1}$. Q/e values for copolym., Q 0.31, e 0.34. Copolym. with vinyl chloride: r_{VDC} 3.2, r_{VC} 0.3 (typical values, 60°); Q 0.22; e 0.36

Hazard & Toxicity: Extremely flammable, fl. p. -10° , autoignition temp. 570° . Rapidly absorbs O_2 forming violently explosive peroxide. MEL: long-term 10 ppm. CNS depressant at high vapour conc. Exp. hepatotoxic and nephrotoxic

Aldrich: 16302-3

Fluka: 95000

Sigma: D1919

Supelco: 4-8526

References:

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