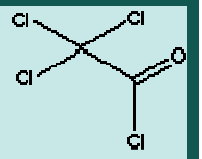
TRICHLOROACETYL CHLORIDE



PRODUCT IDENTIFICATION

CAS NO.	76-02-8
EINECS NO.	200-926-7
FORMULA	CCl_3COCl
MOL WT.	181.83
H.S. CODE	
TOXICITY	
SYNONYMS	Trichloroacetochloride; Superpalite; Trichloromethyl chloroformate; Cloruro de tricloroacetilo; Chlorure de trichloroacétyle;
DERIVATION	
CLASSIFICATION	

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Clear to slightly yellow fuming liquid
MELTING POINT	-57 C
BOILING POINT	114 - 118 C
SPECIFIC GRAVITY	1.61 - 1.63
SOLUBILITY IN WATER	Decomposes
SOLVENT SOLUBILITY	
pH	
VAPOR DENSITY	
AUTOIGNITION	
REFRACTIVE INDEX	1.469 - 1.471
NFPA RATINGS	Health: 3 Flammability: 3 Reactivity: 2
FLASH POINT	
STABILITY	Stable under ordinary conditions. Moisture sensitive.

DESCRIPTION AND APPLICATIONS

Acyl is a radical formed from an organic acid by removal of a hydroxyl group. The general formula of acyl compound is RCO-. Acyl halide is one of a large group of organic substances containing the halocarbonyl group, have the general formula RCO·X, where X is a halogen atom (fluorine, chlorine, bromine, iodine, and astatine) and R may be aliphatic, alicyclic, aromatic, and H etc. In substitutive chemical nomenclature, their names are formed by adding '-oyl' as a suffix to the name of the parent compound; ethanoyl chloride, CH_3COCl, is an example. The terms acyl and aroyl halides refer to aliphatic or aromatic derivatives, respectively. Acyl halides are made by replacing the -OH group in carboxylic acids by halogen using halogenating agents. They react readily with water, alcohols, and amines and are widely used in organic synthetic process whereby the acyl group is incorporated into the target molecules by substitution of addition-elimination sequence called acylation reaction. Acylation reaction involves substitution by an electron donor (nucleophile) at the electrophilic carbonyl group (C=O). Common nucleophiles in the acylation reaction are aliphatic and aromatic alcohols, both of which give rise to esters and amines (RNH_2) which give amides. The carboxylic acid (X = OH) itself can function as an acylating agent when it is protonated by a strong acid catalyst as in the direct esterification of an alcohol. Two common acylation agents, with the general formula RCOX, are acid halides (X = halogen atom) and anhydrides (X = OCOR). Schotten-Baumann reaction is an acylation reaction that uses an acid chloride in the presence of dilute alkali to acylate the hydroxyl and amino group of organic compounds. There are also other acylating agents. Acetyl Chloride is a clear, corrosive and fuming liquid; melting point of -112 C, boiling point of 51-52 C, refractive Index of 1.3890. It undergoes violently hydrolysis in presence of atmospheric moisture. It is soluble in ether, acetone, and acetic

acid. It is prepared by reacting acetic acid with a halogenating agent such as phosphorus(III or V) chloride or sulphur dichloride oxide. It is widely used as an acetylating agent in the synthesis of fine chemicals, agrochemicals and pharmaceuticals. The hydrogen atoms replace oxygen atoms in alcohols or nitrogen atoms in amines, which protects amine groups during amino acid synthesis. It is also used as an intermediate for dyes. It is also used to determine water in organic liquids and in testing cholesterol.

SALES SPECIFICATION	
APPEARANCE	Clear to slightly yellow fuming liquid
ASSAY	99.5% min
SPECIFIC GRAVITY	1.61 - 1.63
IMPURITY	0.2% max (Mono or Dichloroacetyl chloride)
TRANSPORTATION	
PACKING	300kgs in drum
HAZARD CLASS	8 (Packing group: II)
UN NO.	2442
OTHER INFORMATION	
Hazard Symbols: T+, Risk Phrases: 14-22-26-34, Safety Phrases: 26-28-36/37/39-45	