

(4) Trichloronitromethane CCl_3NO_2
CAS No. 76-06-2
HS No. 29.04.90.00
TDG 1580/1583
NIOSH/RTECS No. PB6300000

Synonyms: Chloropicrin, acquinite, chlor-o-pic, dolochlor, larvacide, microlysin, nitrochloroform, nitrotrichloromethane, picfume

Physical Properties: MW: 164.37, mp: -64° , bp: 112.3° , d.1.651, n_D^{20} 1.4608, soluble in water, alcohol and ether. It is an oily, colourless liquid.

Synthesis: Trichloroethylene can be converted to chloropicrin (R.B. Burrows & L. Hunter, J. Chem. soc., 1357 (1932)) by the chlorination of nitromethane and by the reaction of nitromethane with NaOCl.

Reactivity: Reacts violently with aniline, alcohol, sodium hydroxide or methoxide, it can be detonated by shock. Decomposition produces toxic fumes of halide ion and nitrogen oxides.

Toxicity: Poisonous by ingestion, moderately toxic by inhalation, and a powerful irritant. It causes lachrymation, vomiting and pulmonary edema. Oral LD_{50} 250 mg/kg (rat), TLV 0.1 ppm. It is on the EPA TSCA list.

Uses: Insect and rodent control in grain, soil fumigant and fungicide, a warning agent in commercial fumigants.

Suppliers: 8 producers are listed worldwide: USA (4), Japan (3), and PRC (1).