

**Common Name: 1,1,1,2-TETRACHLORO-2,2-DIFLUOROETHANE**

Synonyms: CFC112a; Halocarbon 112a; Refrigerant 112a

CAS No: 76-11-9

 Molecular Formula:  $C_2Cl_4F_2$ 

RTK Substance No: 1807

 Description: Colorless, crystalline solid with an *Ether*-like odor at room temperature, or a liquid above 105°F (41°C)

**HAZARD DATA**

Hazard Rating	Firefighting	Reactivity
<b>2 - Health</b>	Extinguish fire using an agent suitable for type of surrounding fire. <b>1,1,1,2-Tetrachloro-2,2-Difluoroethane</b> itself does not burn.	<b>1,1,1,2-Tetrachloro-2,2-Difluoroethane</b> reacts with CHEMICALLY ACTIVE METALS (such as POTASSIUM, SODIUM, MAGNESIUM and ZINC).
<b>0 - Fire</b>		<b>1,1,1,2-Tetrachloro-2,2-Difluoroethane</b> may react with STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC) and ACID FUMES to release toxic <i>Fluoride</i> fumes.
<b>0 - Reactivity</b>	POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Hydrogen Chloride</i> , <i>Hydrogen Fluoride</i> and <i>Phosgene</i> .	
<b>DOT#:</b> None	Use water spray to keep fire-exposed containers cool.	
<b>ERG Guide #:</b> None		
<b>Hazard Class:</b> None		

**SPILL/LEAKS**
**Isolation Distance:**

Solid Spill: 25 meters (75 feet)

Liquid Spill: 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

Collect solid material in the most convenient and safe manner and place into sealed containers for disposal.

Absorb liquids in vermiculite, dry sand, earth, or a similar material and place into sealed containers for disposal.

**1,1,1,2-Tetrachloro-2,2-Difluoroethane** does not degrade in the atmosphere.

**PHYSICAL PROPERTIES**

<b>Odor Threshold:</b>	<i>Ether</i> -like odor
<b>Flash Point:</b>	Noncombustible
<b>Vapor Pressure:</b>	40 mm Hg at 68°F (20°C)
<b>Specific Gravity:</b>	1.65 (water = 1)
<b>Water Solubility:</b>	Insoluble
<b>Boiling Point:</b>	197°F (91.7°C)
<b>Melting Point:</b>	105°F (41°C)
<b>Ionization Potential:</b>	11.30 eV
<b>Molecular Weight:</b>	203.83

**EXPOSURE LIMITS**
**OSHA:** 500 ppm, 8-hr TWA

**NIOSH:** 500 ppm, 10-hr TWA

**ACGIH:** 100 ppm, 8-hr TWA

**IDLH:** 2,000 ppm

**PROTECTIVE EQUIPMENT**
**Gloves:** Viton and Barrier® (>4-hr breakthrough for *liquid Hydrocarbons, aliphatic*)

**Coveralls:** Tychem® BR, Responder® and TK; and Trellchem® HPS and VPS (>8-hr breakthrough for *liquid Hydrocarbons, aliphatic*)

**Respirator:** >100 ppm - SCBA

**HEALTH EFFECTS**
**Eyes:** Irritation

**Skin:** Irritation and rash

**Inhalation:** Nose, throat and lung irritation, with coughing, and severe shortness of breath (pulmonary edema)

Exposure can cause headache, dizziness, confusion, tremors, lightheadedness, and passing out

**FIRST AID AND DECONTAMINATION**
**Remove** the person from exposure.

**Flush** eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.

**Quickly** remove contaminated clothing and wash contaminated skin with large amounts of soap and water.

**Begin** artificial respiration if breathing has stopped and CPR if necessary.

**Transfer** promptly to a medical facility.

**Medical** observation is recommended as symptoms may be delayed.