

Common Name: **1,1,2-TRICHLOROETHANE**

Synonyms: Ethane Trichloride; Vinyl Trichloride

CAS No: 79-00-5

Molecular Formula: C₂H₃Cl₃

RTK Substance No: 1889

Description: Colorless liquid with a sweet, pleasant odor

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
2 - Health 1 - Fire 0 - Reactivity DOT#: UN 3082 ERG Guide #: 171 Hazard Class: 9 (Environmentally Hazardous Substance)	1,1,2-Trichloroethane may burn, but does not readily ignite. Use dry chemical, CO ₂ , water spray or foam as extinguishing agents. POISONOUS GASES ARE PRODUCED IN FIRE, including <i>Hydrogen Chloride</i> and <i>Phosgene</i> . CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool.	1,1,2-Trichloroethane may react violently with CHEMICALLY ACTIVE METALS (such as ALUMINUM, POTASSIUM, SODIUM, MAGNESIUM and ZINC). 1,1,2-Trichloroethane is not compatible with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); and STRONG BASES (such as SODIUM HYDROXIDE and POTASSIUM HYDROXIDE). 1,1,2-Trichloroethane will decompose on contact with HOT SURFACES or FLAMES to form toxic <i>Hydrogen Chloride</i> and <i>Phosgene</i> gases. 1,1,2-Trichloroethane may attack RUBBER and STEEL.

SPILL/LEAKS

Isolation Distance:

Spill: 50 meters (150 feet)

Fire: 800 meters (1/2 mile)

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

DO NOT wash into sewer.

1,1,2-Trichloroethane is harmful to aquatic life at very low concentrations.

PHYSICAL PROPERTIES

Odor Threshold:	Sweet, pleasant odor
Flash Point:	Nonflammable
LEL:	6%
UEL:	15.5%
Vapor Density:	4.63 (air = 1)
Vapor Pressure:	19 mm Hg at 68°F (20°C)
Specific Gravity:	1.44 (water = 1)
Water Solubility:	Very slightly soluble
Boiling Point:	237°F (114°C)
Melting Point:	-34°F (-37°C)
Ionization Potential:	11 eV
Molecular Weight:	133.4

EXPOSURE LIMITS

OSHA: 10 ppm, 8-hr TWA

NIOSH: 10 ppm, 10-hr TWA

ACGIH: 10 ppm, 8-hr TWA

IDLH: 100 ppm

The Protective Action Criteria values are:

PAC-1 = 10 ppm PAC-2 = 15 ppm PAC-3 = 100 ppm

PROTECTIVE EQUIPMENT

Gloves:	Viton (>8-hr breakthrough)
Coveralls:	Tychem® CSM, BR and TK (>8-hr breakthrough)
Respirator:	>10 ppm - SCBA

HEALTH EFFECTS

Eyes:	Irritation and burns
Skin:	Irritation and burns
Inhalation:	Nose and throat irritation with coughing and wheezing Headache, dizziness, lightheadedness, and passing out
Chronic:	Cancer (liver, adrenal gland) in animals

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.