



trans-1,2 Dichloroethylene

Typical Properties

Chemical Names	<i>trans-1,2 Dichloroethylene</i>
Chemical Formula	CClHCClH
Molecular Weight	96.95
Boiling Point	118 °F (48 °C)
Freezing Point	-56.9 °F (-49.4 °C)
Specific Gravity @ 25°C	1.27
Pounds per Gallon at 68 °F (20°C)	10.53
Vapor Pressure (mm Hg @ 25°C)	336
(mm Hg @ 87°F)	400
Solubility at 25°C, g trans/100g water	0.063
Flash Point, °F (C)	36 (2.2)
Evaporation Rate @ 77°F (ether = 1.00)	0.63
Kauri-Butanol Value	117
Flammability Limits in Air, % by vol.	LEL: 6.7%
	UEL: 18%
Autoignition Temperature °C	460
Partition Coefficient (log octanol/water)	2.09

trans-1,2 Dichloroethylene is available in 55 gallon drums or ISO tank transports.

Specifications and Typical Analysis

Appearance	Colorless Transparent Liquid
Assay	> 99.7%
Moisture, ppm max	100
pH	6.5 – 7.2

Properties & Characteristics

trans-1,2 Dichloroethylene is a specialty chemical solvent product with unique solvency characteristics and a favorable toxicological profile. *trans-1,2 Dichloroethylene* has negligible global warming potential and is not regulated as an Ozone Depleting Chemical in the USA. It is not listed as a Hazardous Air Pollutant, not regulated as a Prop 65 chemical, and not classified as a carcinogen or suspected carcinogen in the USA. Although *trans-1,2 Dichloroethylene* is flammable in its neat form, it does share many of the characteristics that have made other chlorinated solvents popular, including:

- *Fast Evaporation,*
- *High Solvency, and*
- *Low Residue*

trans-1,2 Dichloroethylene is an EPA SNAP approved solvent in aerosol, electronic, metal and precision cleaning applications. It has also received EPA SNAP approval in some foam blowing formulations.

trans-1,2 Dichloroethylene may be used neat or as a co-solvent in a variety of azeotropic or non-azeotropic* blends. *trans-1,2 Dichloroethylene* enhances the functionality and economics of a wide array of solvent



formulations. **trans-1,2 Dichloroethylene** solvent enables customized blends based upon end-use requirements. **trans-1,2 Dichloroethylene** solvent increases the solvency power of many fluoro-fluids. Applications include: precision cleaning in the electronics and computer components industries, aerosol cleaning (high-end precision parts), foam blowing products, material deposition, in-situ-manufacturing, and vapor degreasing.

**Users should review patent information that may cover blends.*

Applications

trans-1,2 Dichloroethylene is an excellent choice as a solvent or solubilizer in many formulations. It is one of the few chlorinated solvents that has **not** come under attack for environmental or toxicity concerns. While already established as a preferred cosolvent in electronic cleaning applications, **trans-1,2 Dichloroethylene** is seeing increased usage in vapor degreasing, specialty cleaning products, spot lifters, degreasers, and as an enhancer for many formulations that require a fast evaporating, low odor, low residue solvent. With a KB value greater than 100, small additions of **trans-1,2 Dichloroethylene** can assist in dissolving materials or acting as a coupling agent in difficult formulations. Although **trans-1,2 Dichloroethylene** is a VOC, it can be blended with other exempt solvents to provide the performance and cost for many formulations. By utilizing other solvents and propellants, **trans-1,2 Dichloroethylene** blends can be made to exhibit little or no flammability.

Environmental

trans-1,2 Dichloroethylene has a favorable environmental profile:

Ozone Depleting:	No	EPA Snap Approved:	Yes
Global Warmer:	No	Hazardous Air Pollutant:	No
VOC:	Yes	Prop 65 Chemical:	No
Relative Reactivity:	123	Carcinogen or suspected Carcinogen:	No
TLV:	200		

Health Hazards

Due to its volatile nature, users of **trans-1,2 Dichloroethylene** should exercise appropriate safety procedures to ensure that a safe inhalation exposure is maintained. In addition, **trans-1,2 Dichloroethylene** does show moderate flammability characteristics. It should be handled in a safe environment designed for chemicals of this type. Exposure should be minimized by the use of proper safety equipment and ventilation.

Consult Material Safety Data Sheet for further information.

Suggested Replacement For:

Trichloroethylene, Methylene Chloride, Perchloroethylene, NPB

*Hazardous Material
Information System*

HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®
HMIS®							
HEALTH		*	2				
FLAMMABILITY				3			
PHYSICAL HAZARD				2			
PERSONAL PROTECTION							
HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®	HMIS®