

1,2-Dichloroethylene (Cis- and Trans-) (C₂H₂Cl₂)

What is 1,2-Dichloroethylene?

1,2-Dichloroethylene is a highly flammable man-made colorless liquid with a sharp, harsh odor. It is used to produce solvents and in chemical mixtures. There are two forms of 1,2-Dichloroethylene; one is called cis-1,2-dichloroethylene and the other is called trans-1,2-dichloroethylene and both forms have slightly different properties. Sometimes both forms are present as a mixture.

1,2-Dichloroethylene evaporates rapidly into the air but can travel through soil or dissolve in water. It is possible that it can contaminate groundwater.

Does 1,2-Dichloroethylene have any additional names?

1,2-Dichloroethene, 1,2-DCE

What are the known health effects?

Some people who drink water containing cis- or trans-1,2-Dichloroethylene in excess of the MCL over many years could experience problems with their liver.

How does exposure occur?

Exposure to both forms of 1,2-Dichloroethylene can occur by breathing air around hazardous waste sites contaminated with 1,2-Dichloroethylene, drinking contaminated tap water, or breathing vapors from contaminated water while cooking, bathing, or washing dishes.

Is this contaminant regulated?

Yes, and water supplied to customers of Mount Laurel MUA is in compliance with USEPA and NJDEP requirements. The maximum concentration of cis-1,2-Dichloroethylene permitted in drinking water is 70 ppb and the maximum concentration of trans-1,2-Dichloroethylene permitted in drinking water is 100 ppb; Neither cis- or trans-1,2-Dichloroethylene is currently detected in water supplied to MLTMUA customers.

How can I reduce exposure?

1,2-Dichloroethylene can be removed from drinking water through reverse osmosis and granulated activated carbon filtration.

Additional information for 1,2-Dichloroethylene, including the information referenced, can be found at:

https://cfpub.epa.gov/ncea/iris/iris_documents/documents/toxreviews/0418tr.pdf

<https://www.atsdr.cdc.gov/toxprofiles/tp87.pdf>