



1,1,2,2-TETRACHLOROETHANE

What is 1,1,2,2-tetrachloroethane?

1,1,2,2-tetrachloroethane is a colorless liquid with a sweet odor. It is a man-made product and is not found in nature. 1,1,2,2-tetrachloroethane evaporates easily, meaning that it turns into a vapor. It does not burn easily.

Where can 1,1,2,2-tetrachloroethane be found and how is it used?

In the past, 1,1,2,2-tetrachloroethane was used to clean and remove grease from metals, and as an ingredient in paints and pesticides. Today, 1,1,2,2-tetrachloroethane is not used for these purposes in the United States. It is only used to make other chemicals.

Most 1,1,2,2-tetrachloroethane that is released moves into the air or ground water. If it is released on the land, it does not attach to the soil. When it is released into surface water, most of it vaporizes.

How can people be exposed to 1,1,2,2-tetrachloroethane?

Since little of this chemical is produced, most workers will not be exposed to it. However, there is a chance that some workers could be exposed when it is used to make other chemicals.

You could be exposed to 1,1,2,2-tetrachloroethane through:

- **Breathing** 1,1,2,2-tetrachloroethane vapors in indoor and outdoor air.
- **Drinking** 1,1,2,2-tetrachloroethane. It is rarely found in public drinking water. It might be found in private well water that is used for drinking. It has not been found in food.
- **Touching** it if a spill or accident happens at work. 1,1,2,2-tetrachloroethane can be found at hazardous waste sites. If you touch the soil at these sites, you could be exposed to it.
- **Eye contact** by splashing it in your eyes. The possibility of this occurring at work is rare because 1,1,2,2-tetrachloroethane is usually kept in a closed system.

How does 1,1,2,2-tetrachloroethane work?

1,1,2,2-tetrachloroethane can enter the body if you breathe air containing it, or if the chemical touches your skin. If you drink water with 1,1,2,2-tetrachloroethane in it, the chemical will go into your body and the body will process it. The chemical will leave your body in a few days through the urine and as you exhale.

Poison Control Center 24/7 Emergency Contact Number: 1-800-222-1222
DPH 24/7 Contact Number: 1-888-295-5156



Frequently Asked Questions

How can 1,1,2,2-tetrachloroethane affect my health?

1,1,2,2-tetrachloroethane affects the liver and nervous system. Short-term breathing of very high levels of 1,1,2,2-tetrachloroethane can lead to problems with your liver, lungs, central nervous system, stomach, and intestines. Breathing 1,1,2,2-tetrachloroethane for a long period of time can have more serious effects, such as jaundice, a condition where the whites of your eyes and your skin become yellowed when the liver is affected. Other effects are headaches, shakiness, dizziness, numbness, or sleepiness.

If you breathe high levels of 1,1,2,2-tetrachloroethane in a closed room, you may feel tired. It can also make you vomit, feel dizzy, or pass out. Most people recover from these effects once they are moved to an area with fresh air. Drinking or touching 1,1,2,2-tetrachloroethane over a long period of time can cause liver damage, stomach pain, or dizziness.

The health effects from being exposed to a small amount 1,1,2,2-tetrachloroethane for 365 days or more are not known. It is also not known whether 1,1,2,2-tetrachloroethane will cause reproductive problems in people. Animal studies showed a large increase in liver tumors in mice exposed to 1,1,2,2-tetrachloroethane orally. The Environmental Protection Agency (EPA) has classified 1,1,2,2-tetrachloroethane as a chemical that may cause cancer in humans.

How is 1,1,2,2-tetrachloroethane poisoning treated?

1,1,2,2-tetrachloroethane does not remain in the body at high levels. Right now, there is no method to speed up the way the body gets rid of it. One way might be to increase the breathing rate, so the chemical can be exhaled faster. Most people recover from exposure once they are in fresh air.

What should I do if exposed to 1,1,2,2-tetrachloroethane?

- **If you breathe 1,1,2,2-tetrachloroethane**, move to an area with fresh air. If it is hard to breathe, you should receive oxygen and medical attention.
- **If you touch 1,1,2,2-tetrachloroethane**, wash with soap and water for at least 15 minutes. Also take off clothing and shoes that contacted the chemical. If your symptoms are very bad, get medical attention.
- **If you get 1,1,2,2-tetrachloroethane in your eyes**, flush your eyes with water for at least 15 minutes. Then, get medical attention right away.
- **If you drink 1,1,2,2-tetrachloroethane**, get medical attention right away.

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What factors limit use or exposure to 1,1,2,2-tetrachloroethane?

You can help prevent exposure by working in an area with a good air system. It is also a good idea to wear safety glasses to protect you from splashes. Wear clothing and gloves that resist chemicals to protect your skin.

Is there a medical test to show whether I've been exposed to 1,1,2,2-tetrachloroethane?

There are no medical tests to determine if you were exposed to 1,1,2,2-tetrachloroethane. The signs of exposure (stomach pain, feeling tired or dizzy, etc.) are the same for many diseases. There are medical tests to determine if your liver is working the way it should. Liver disease has many causes.

Technical information for 1,1,2,2-tetrachloroethane

CAS Number: 79-34-5

Chemical Formula: C₂H₂Cl₄

Carcinogenicity (EPA): likely to be carcinogenic to humans.

MCL (Drinking Water): There is no MCL for 1,1,2,2-tetrachloroethane.

OSHA Standards: 5 ppm (35 mg/m³)

NIOSH Standards: 1ppm (7mg/m³)

Resources

U.S. E.P.A., Technology Transfer Network, Air Toxics Website, 1,1,2,2-tetrachloroethane, <http://www.epa.gov/ttn/atw/hlthef/tetrachl.html>

Agency for Toxic Substances and Disease Registry, ToxFAQs for 1,1,2,2-tetrachloroethane, 2008, <https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=801&tid=156>