



CARBON TETRACHLORIDE

What is CARBON TETRACHLORIDE?

Carbon tetrachloride is a man-made clear liquid with a strong, sweet odor that smells like chloroform. As a volatile organic compound (VOC), carbon tetrachloride easily vaporizes.

Where can carbon tetrachloride be found and how is it used?

Carbon tetrachloride is used for producing other chemicals. Carbon tetrachloride is used to make refrigerants, as a propellant for aerosols, a degreaser and a pesticide. Factories release carbon tetrachloride as a gas into the air and as a liquid into the water or soil. The liquid form can also be released into soil or water from careless waste disposal. Most of carbon tetrachloride's historical uses have ended due to the harmful effects of this agent. Since carbon tetrachloride vaporizes easily, most of this chemical exists in the air as a gas, where it can remain for several years before it breaks down. This chemical does not adhere to soil or water particles and instead either vaporizes or seeps into groundwater. Carbon tetrachloride does not build up in fish.

How can people be exposed to carbon tetrachloride?

You could be exposed to carbon tetrachloride through:

Breathing vapors if you work where carbon tetrachloride is used or made. You can also be exposed by breathing outside air containing carbon tetrachloride.

Drinking water containing carbon tetrachloride.

Touching soil that is contaminated with it, and swimming or bathing in contaminated water.

How does carbon tetrachloride work and how can it affect my health?

Short-term, or acute, exposure to high levels of carbon tetrachloride in drinking water damages the liver and kidneys. Other symptoms include headache, dizziness, tiredness, weakness and blurred vision. Very high doses can also cause vomiting, stomach pain or death.

Breathing carbon tetrachloride may seriously damage the liver and kidneys. Other possible effects are headache or dizziness, tiredness or lightheadedness. Some people breathing carbon tetrachloride seem dazed. Breathing carbon tetrachloride can also cause vomiting and stomach pain. Breathing high doses causes lung damage and death.

Breathing carbon tetrachloride often, over many years, is linked with liver cancer. Carbon tetrachloride is proven to cause cancer in animals. Human data is limited or does not exist.

How is carbon tetrachloride poisoning treated?

There is no treatment for carbon tetrachloride poisoning. Treatment depends on the type of exposure.



What should I do if exposed to carbon tetrachloride?

Because of its limited use, it is unlikely that people will be exposed to carbon tetrachloride outside of places that make or use it.

If carbon tetrachloride gets on your skin, remove contaminated clothing and wash thoroughly with soap and water. Get medical attention.

If you get carbon tetrachloride in your eyes, flush eyes with large amounts of water for 15 minutes. Get medical help right away.

If you swallow carbon tetrachloride, get medical help right away.

If you breathe carbon tetrachloride, move to fresh air. Get medical help right away.

What factors limit use or exposure to carbon tetrachloride?

At work, reduce exposure by following health and safety rules. Use respirators and other personal protective equipment. The general population should avoid places that make or use carbon tetrachloride or waste sites contaminated with it.

Is there a medical test to show whether I've been exposed to carbon tetrachloride?

Carbon tetrachloride can be measured in blood, fat or other tissues. These tests can prove exposure but cannot be used to reliably determine any long-term adverse health effects.

Technical information for carbon tetrachloride

CAS Number: 56-23-5

Chemical Formula: CCl₄

Carcinogenicity (EPA): B2 – Probable human carcinogen.

MCL (Drinking Water): 5 ppb

OSHA Standards: 10 ppm (8-hour time weighted average)

NIOSH Standards: 2 ppm Short Term Exposure Limit (60 minute limit)

ACGIH: TLV 5 ppm; 8-hour Time Weighted Average (TWA)

References and Sources

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