

US EPA ARCHIVE DOCUMENT

1,2,4-Trichlorobenzene

CAS Number: 120-82-1

What is 1,2,4-trichlorobenzene?

1,2,4-Trichlorobenzene is a man-made chemical that looks like a colorless liquid.

What is 1,2,4-trichlorobenzene used for?

1,2,4-Trichlorobenzene has several uses. It is used as an intermediate or building block to make herbicides, substances that destroy or prevent the growth of weeds. It is also used as a solvent and dielectric fluid (a liquid that conducts little or no electricity), a degreaser (a substance that removes grease), and as a lubricant.

How can 1,2,4-trichlorobenzene enter and leave your body?

1,2,4-Trichlorobenzene can enter your body when you breathe contaminated air or eat contaminated food. It can also be absorbed through your skin if you touch it.

How can you be exposed to 1,2,4-trichlorobenzene?

You can be exposed to 1,2,4-trichlorobenzene if you breathe contaminated air, eat contaminated food (especially fish), or if your skin comes into contact with the substance. If you work in an industry that makes or uses 1,2,4-trichlorobenzene, you can be exposed by breathing it while it is being made or used.

What are the health effects of exposure to

1,2,4-trichlorobenzene?

No information is available on the short- or long-term health effects of 1,2,4-trichlorobenzene in humans. However, animal studies show that rats exposed to the substance by injection experienced an enlargement of the adrenal glands located near the kidney. Rats that breathed the substance experienced irritation of the lungs and dyspnea, which is shortness of breath or difficulty breathing.

Rats exposed to 1,2,4-trichlorobenzene for a long period of time experienced a number of symptoms, including changes in the enzymes of the liver. Oral exposure resulted in an increase in the adrenal (glands near the kidney) weights.

No information is available to determine if 1,2,4-trichlorobenzene can cause cancer in humans. However, animal studies show that mice exposed to the substance through their skin developed tumors. The U.S. Environmental Protection Agency (EPA) has categorized 1,2,4-trichlorobenzene as "not classifiable" with respect to its likelihood to cause cancer.

What levels of exposure have resulted in harmful health effects?

The U.S. EPA established a reference dose (RfD) of 0.01 milligrams per kilograms a day of 1,2,4-trichlorobenzene. The RfD is an estimate of the highest daily oral exposure humans can be exposed to without resulting in harmful effects.

Where can you get more information?

Contact your state health or environmental department, or:

Agency for Toxic Substances and Disease Registry
Division of Toxicology
1600 Clifton Road, N.E., E-29
Atlanta, Georgia 30333

References

1. U.S. Environmental Protection Agency. *Health Effects Notebook for Hazardous Air Pollutants, 1,2,4-Trichlorobenzene*, Office of Air Planning & Standards, 1994.
2. U.S. Environmental Protection Agency. *OPPT Chemical Fact Sheet, 1,2,4-Trichlorobenzene (TCB) Fact Sheet: Support Document*. Washington, D.C.: Office of Pollution Prevention and Toxics, 1994.
3. U.S. Department of Health and Human Services. Hazardous Substances Data Bank (HSDB, online database). National Library of Medicine Bethesda, MD, 2001.