



ETHYLBENZENE

What is ethylbenzene?

Ethylbenzene is a clear, colorless liquid with a sweet odor, similar to gasoline. Ethylbenzene evaporates easily and catches fire easily.

Where can ethylbenzene be found and how is it used?

Ethylbenzene can be detected in air, water, and soil. It occurs naturally in coal tar and petroleum, but it is also in the environment from human activities. Its main use is to manufacture styrene, a compound used to make plastics. Ethylbenzene is also found in gasoline, paints, inks, insecticides, carpet glues, and tobacco products.

How can people be exposed to ethylbenzene?

You could be exposed to ethylbenzene through:

Breathing ethylbenzene where it is made or used. People who work with varnish, spray paints, adhesives, and glue may be exposed to high levels at work or around the home. Persons living near a factory where ethylbenzene is made or used can breathe it in air near the factory. Gasoline and car exhaust are major forms of exposure for the public. Exposure can also occur from tobacco smoke.

Drinking water contaminated by ethylbenzene. Liquid ethylbenzene can enter water or soil from spills, factory releases, or from leaking underground gasoline tanks.

How does ethylbenzene work and how can it affect my health?

Short-term exposure to airborne ethylbenzene can affect the central nervous system, causing dizziness, sleepiness, headache, or difficulty with hand coordination. Ethylbenzene also irritates the eyes, nose, throat, and skin. Long-term exposure to airborne ethylbenzene has a lasting effect on the nervous system.

Ethylbenzene was named as a possible cancer-causing substance. Animal studies show that long-term exposure causes liver and kidney damage. Although the health effects of drinking ethylbenzene are not well known, animal studies show that large doses impact the central nervous system. Mice and rats that breathed ethylbenzene developed cancers of the lung, liver, and kidneys.

How is ethylbenzene poisoning treated?

There are no treatments specific to ethylbenzene poisoning. Doctors can treat the symptoms and effects of exposure to high levels.

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Page 1 of 2



What should I do if exposed to ethylbenzene?

Persons exposed to ethylbenzene should be quickly removed from the source of exposure. Remove contaminated clothing and wash skin with soap and water. Flush the eyes with water. Seek medical attention immediately.

What factors limit use or exposure to ethylbenzene?

Ethylbenzene is found in numerous products common in and around the home including gasoline, pesticides, and tobacco products. Exercise caution in the use and storage of products containing ethylbenzene. Such products should be properly labeled to avoid accidental poisoning. Workers in industries that use or produce ethylbenzene should follow recommended health and safety procedures at all times.

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

Tests can detect ethylbenzene levels in the blood, tissue, urine, and breath of someone exposed.

Technical information for ethylbenzene

CAS Number: 100-41-4

Chemical Formula: C₈H₁₀

Carcinogenicity (EPA): D – Not classifiable.

MCL (Drinking Water): 0.7 mg/L

OSHA Standards: 100 ppm (435 mg/m³) 8-hour Time Weighted Average

NIOSH Standards: 100ppm (435 mg/m³) 8-hour Time Weighted Average;
short-term 15-min. 125 ppm (545 mg/m³)

Resources

Agency for Toxic Substances and Disease Registry. *Toxicological Profile for Ethylbenzene* (Update). November 2010.

<https://wwwn.cdc.gov/TSP/ToxProfiles/ToxProfiles.aspx?id=383&tid=66>

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Page 2 of 2