

What is styrene?

Styrene is a colorless liquid that evaporates easily and smells sweet. It is used to make a chemical compound called polystyrene. Many commercial products are made of polystyrene, such as Styrofoam, disposable utensils, plastic dishware, and appliance casings. Styrene is also used to reline sewer pipes.

Who is exposed to styrene?

Any person can be exposed to styrene. Styrene occurs naturally in fruits, vegetables, nuts, beverages, and meats. There may be small amounts of styrene in food that is stored in polystyrene containers. Styrene can also be inhaled in small amounts from cigarette smoke, car exhaust, and photocopier or printer toner. People may be exposed who are living near industrial facilities or hazardous waste sites. If sewers are being relined with polystyrene, the styrene vapors may enter your home until the polymer has completely cured.

How can styrene affect my health?

Breathing high amounts of styrene can irritate the eyes, nose, and lungs. Workers who are exposed to high amounts of styrene for a long time can have injury to their nervous systems.

How likely is styrene to cause cancer?

The Department of Health and Human Services (DHHS), National Toxicology Program (NTP) lists styrene as “reasonably anticipated to be a human carcinogen.” The International Agency for Research on Cancer (IARC) has determined that styrene is a possible human carcinogen.

How can styrene affect children?

We do not know whether children would be more sensitive than adults to the effects of styrene. It is likely that children would have the same health effects as adults.

How can I reduce the risk of exposure to styrene?

Avoid smoking cigarettes and breathing indoor air contaminated with styrene vapors from building materials, tobacco smoke, or home copiers.

Is there a medical test to show whether I have been exposed to styrene?

Styrene can be measured in your blood, urine, and body tissues. It is difficult to predict the kind of health effects that might develop from exposure to styrene. Medical tests are only useful if performed within 24 hours after exposure. Styrene may be detected as the consequence of exposure to other substances.

Has the federal government made recommendations to protect human health?

The EPA has determined that lifetime exposure to 0.1 milligram per liter (mg/L) styrene is not expected to cause any adverse effects. The National Institute for Occupational Safety and Health

(NIOSH) recommends workers be exposed to no more than 50 parts per million (ppm) styrene on average over a 10-hour workday. The Occupational Safety and Health Administration (OSHA) has a permissible exposure limit for styrene of 100 ppm average over an 8-hour workday.

How can I learn more about styrene?

- If you have concerns about styrene, contact your healthcare provider.
- Call your local health department. A directory of local health departments is located at <https://www.vdh.virginia.gov/local-health-districts/>. Contact the Virginia Department of Health at (804) 864-8127 or at toxicology@vdh.virginia.gov.
- Visit the Agency for Toxic Substances and Disease Registry website at <https://www.atsdr.cdc.gov/substances/toxsubstance.asp?toxid=74>.

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