

Styrene (C₈H₈)

What is Styrene?

Styrene is a colorless liquid that evaporates easily and has a sweet smell. It often contains other chemicals that give it a sharp, unpleasant smell. Styrene is widely used to make plastics and rubber. Products containing Styrene include insulation, fiberglass, plastic pipes, automobile parts, shoes, drinking cups and other food containers, and carpet backing. Most of these products contain Styrene linked together in a long chain (polystyrene) as well as unlinked Styrene. Styrene occurs naturally in small quantities in some plants and foods (cinnamon, coffee beans, balsam trees, and peanuts) and is also found in coal tar.

Does Styrene have any additional names?

Phenylethene, Vinylbenzene, Ethenylbenzene, and Styrol

What are the known health effects?

Some people who drink water containing Styrene well in excess of the MCL over many years could have problems with their liver, kidneys, or circulatory system.

How does exposure occur?

Exposure may occur by drinking or bathing in contaminated water or by smoking cigarettes or eating food packaged in polystyrene containers. Small amounts of Styrene can be transferred to food from Styrene-based packaging material. Ingesting low levels of Styrene that occurs naturally in a variety of food such as fruits, vegetables, nuts, beverages, and meats is another means of exposure.

Is this contaminant regulated?

Yes, and water supplied to Mount Laurel MUA customers is in compliance with USEPA and NJDEP requirements. The maximum concentration of Styrene permitted in drinking water is 100 ppb; water supplied by the MLTMUA system has not reported any detections of Styrene.

How can I reduce exposure?

Styrene in drinking water can be removed at point of use by granular activated charcoal filtration.

Additional information regarding Styrene, including the information referenced, can be found at:

https://www.epa.gov/sites/production/files/2020-05/documents/styrene_update_2a.pdf

<https://www.atsdr.cdc.gov/toxprofiles/tp53.pdf>