



Styrene

Formula: C₈H₈

CAS: 100-42-5

Source: Manufacturing, Fabrication, Petrochemical Industries

Detection Method: Tiger/Tiger^{LT}/Tiger Select, Cub/Cub^{TAC}, Falco/Falco^{TAC}, TVOC 2, GasClam 2 & GasCheck G

Styrene is a colourless liquid that evaporates easily. In its pure form, styrene has a sweet smell. Manufactured styrene may contain aldehydes, which give it a sharp, unpleasant odour. Large amounts of styrene are produced in the United States and small amounts are produced naturally by plants, bacteria, and fungi. Styrene is also present in combustion products such as cigarette smoke and automobile exhaust.

C₈H₈ - SMOKERS ARE EXPOSED TO STYRENE AS IT OCCURS IN CIGARETTE SMOKE.

A Useful Ingredient

Styrene is a flammable liquid that is used to make polystyrene plastics, fibreglass, rubber, and latex.

It occurs naturally in some fruits, vegetables, meats, nuts, and beverages.

Styrene is used to make:

- Insulation
- Pipes
- Automobile parts
- Printing cartridges and copy machine toner
- Food containers
- Packaging
- Carpet backing
- Luggage
- Shoes
- Toys
- Floor waxes and polishes

Cigarette smoke and vehicle exhaust contain styrene.

Hazards of Styrene

People are exposed to styrene in the workplace and in the environment. Workers in certain occupations are potentially exposed to much higher levels of styrene than the general population. For example, workers who fabricate boats, car and truck parts, tanks, and bath tubs and shower stalls with glass fibre-reinforced polyester composite plastics, may breathe in high levels of styrene in the workplace. Workers may also absorb styrene through the skin.

Styrene is primarily used in the production of polystyrene plastics and resins. Acute (short-term) exposure to styrene in humans results in mucous membrane and eye irritation, and gastrointestinal effects. Chronic (long-term) exposure to styrene in humans results in effects on the central nervous system (CNS), such as headache, fatigue, weakness, and depression, CNS dysfunction, hearing loss, and peripheral neuropathy.

Several epidemiologic studies suggest there may be an association between styrene exposure and an increased risk of leukemia and lymphoma. However, the evidence is inconclusive due to confounding factors.

Styrene Detection Instruments



Fixed Instruments



Semi-Portable Instruments



Portable Instruments



Personal Instruments

