

Styrene used in Cured In Place Pipe Relining

What is Cured In Place Pipe (CIPP) relining?

The Cured In Place Pipe (CIPP) relining process involves the use of a plastic resin within an existing pipe to create a new pipe. The process allows for the repair of sewer pipes without extensive excavation that can be disruptive to local communities and businesses. Amongst other components, CIPP process uses a resin containing a substance called styrene.

What is styrene?

Styrene is a clear, colourless liquid that is commonly used in the production of many everyday products such as plastic packaging, counter tops, disposable cups and containers, insulation and others. Styrene is also produced naturally by some plants. We are constantly exposed to small amounts of styrene in both ambient and indoor air, mostly attributable to emissions from building materials, and consumer products.

When heated, styrene has a very distinctive smell, which some have described as a strong bitter sweet smell. The smell can be detected in the air at concentrations as low as 0.016 parts per million (ppm), far below the concentration associated with adverse impacts on health.

What are the health effects from exposure to styrene during CIPP work?

CIPP work is unlikely to result in adverse health effects. In Ontario, the Occupational Health and Safety Act sets the occupational exposure limit for styrene at 35 ppm. The short term exposure limit for the general public is 5 ppm. In a study conducted for Toronto Works and Emergency Services the highest levels of styrene measured in homes during CIPP work ranged between 0.1 and 0.2 ppm – much lower than the applicable occupational and health benchmarks.

Who can I contact if I am concerned about my exposure to styrene?

If you have specific health concerns related to your exposure to styrene you should contact your primary health care provider. For general questions about styrene and health, please contact Toronto Public Health at 416 338-7600. For questions about the CIPP relining process, please contact 311.