

PVC Cement: Tetrahydrofuran and Associated Volatiles

Tetrahydrofuran (THF, CAS 109-99-9) is predominantly found as a major component in poly (vinyl chloride) (PVC) cement and is often detected in indoor air samples. Unlike many VOCs, such as ethanol, acetone, and isopropanol, which may have multiple sources from products used within the home, this typically isn't the case with THF. The appearance of THF in indoor air usually indicates that PVC piping has recently been installed, whereby PVC cement is used to join pieces of PVC pipe together. Hobbyists also use PVC cement for projects. Opened containers of PVC cement can also be a source of THF. THF has a strong odor and can cause eye and upper respiratory irritation (<http://www.cdc.gov/niosh/npg/npgd0602.html>), so good ventilation is always recommended when using these products.

A quick search of tetrahydrofuran under the Ingredient tab of the Household Product Database (<http://householdproducts.nlm.nih.gov/>) of the National Institute of Health reveals that PVC cement also contains three other common VOCs. Varying amounts of methyl ethyl ketone (CAS 78-93-3), cyclohexanone (CAS 108-94-1), and acetone (CAS 67-64-1) are normally present in PVC cement, which add to the overall VOC levels in the indoor air.

About Prism Analytical Technologies, Inc.

Prism Analytical Technologies, Inc. is a leading consultative air testing laboratory in the United States that is devoted to the chemical identification and analysis of contaminants in the air. We are a recognized leader in the development and deployment of ambient air testing methodologies for Fortune 100 and 500 companies, industrial hygienists, and environmental consultants. Prism's science-based technologies and wide range of air testing support help clients solve indoor air quality, process control, industrial, and environmental challenges.