

Independent Guide

What do I need to know about Formaldehyde?



Independent workplace compliance

What is formaldehyde?

Formaldehyde is a colourless, strong smelling gas. It is widely used in the manufacture of building materials and numerous household products. There are two types of formaldehyde resin; urea formaldehyde (UF) and phenol formaldehyde (PF). Products made from both types release formaldehyde gas, the urea formaldehyde generally emitting higher levels.

Where is it found?

Formaldehyde is an important industrial chemical used to make other chemicals, building materials and household products. It is used in glues, wood products, preservatives, permanent press fabrics, paper product coatings and insulation materials. Building products made from formaldehyde resins can "off-gas" (emit) formaldehyde gas. These products include particle board used as sub-flooring or shelving, fibreboard cabinets and furniture, plywood wall panels and foamed-in-place urea formaldehyde insulation. Incomplete engine combustion, cigarette smoking and burning natural gas also release formaldehyde.

What is its significance?

Low levels of formaldehyde can cause irritation of the eyes, nose, throat and skin. It is possible that people with asthma may be more sensitive to the effects of inhaled formaldehyde. Exposure to formaldehyde can cause symptoms similar to those produced by colds, flu and allergies. Formaldehyde has caused cancer in laboratory animals and may be linked to some cancers in humans following continuous exposure.

What are the exposure limits?

Formaldehyde is normally present at low levels, usually less than 0.06ppm (parts per million) in both outdoor and indoor air. Formaldehyde affects people in various ways. Some people are very sensitive to formaldehyde, while others may have no noticeable reaction at the same level of exposure. The Health and Safety Executive guidance note, Workplace Exposure Limits EH40, maximum exposure limit for formaldehyde is 2ppm over an eight hour time-weighted average reference period.

What are the solutions?

Try to avoid using products with high formaldehyde content.
Increase ventilation after bringing new sources of formaldehyde into your building (i.e. 24 hour ventilation following an office refurbishment).
Avoid smoking indoors.

How can you measure formaldehyde levels?

In cases where accuracy of results is important, only trained professionals should measure formaldehyde, because of the difficulty in obtaining good data and interpreting the results. You can monitor levels of formaldehyde and other volatile organic compounds (VOCs), such as acetone and toluene, as part of an indoor air quality (IAQ) audit.

This guide is of a general nature; specific advice can be obtained from Assurity Consulting.

Assurity Consulting is the UK's leading independent compliance consultancy specialising in workplace health, safety and environmental solutions. We have over 30 years' experience of helping customers of all sizes, from across all sectors, manage their compliance responsibilities, making sure that their organisation is compliant, their employees are safe, their processes are cost effective and their management team is in control.



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