

Formaldehyde

Formaldehyde is a colourless gas with a strong, pungent odour. Formaldehyde can affect you when you breathe its vapour or come into contact with materials containing formaldehyde. It reacts very rapidly with moist body tissue, so particularly vulnerable areas are those that can come into direct contact such as the skin, upper respiratory tract and eyes.

Low ambient concentrations of formaldehyde can cause irritation of the upper respiratory tract. At higher concentrations, the effects become more severe, with levels above 10 ppm causing coughing and chest tightness. Exposure to very high levels can lead to death from throat swelling and chemical burns to the lungs.

In some people, exposure to formaldehyde vapours, even at very low concentrations, leads to respiratory sensitization resulting in an allergic reaction similar to asthma. This can be triggered at any time, even in individuals who have worked with formaldehyde in the past with no apparent reaction, resulting in shortness of breath, chest tightness, wheezing and coughing.

Although there is no conclusive evidence available to prove that formaldehyde is a human carcinogen, it has been shown to cause cancer in animals. Formaldehyde is therefore considered to be a probable human carcinogen, particularly as a cause of nasal and nasopharyngeal cancers as these areas are more likely to come into direct contact with formaldehyde.

Source: Safety Directory.com

http://www.safetydirectory.com/hazardous_substances/formaldehyde/fact_sheet.htm

Chronic respiratory effects of indoor formaldehyde exposure a recent study by Krzyzanowski et al concluded that formaldehyde had a significantly negative effect on children's health, particularly those with asthma.

Abstract

The relation of chronic respiratory symptoms and pulmonary function to formaldehyde (HCHO) in homes was studied in a sample of 298 children (6-15 years of age) and 613 adults. HCHO measurements were made with passive samplers during two 1-week periods. Data on chronic cough and phlegm, wheeze, attacks of breathlessness, and doctor diagnoses of chronic bronchitis and asthma were collected with self-completed questionnaires. Peak expiratory flow rates (PEFR) were obtained during the evenings and mornings for up to 14 consecutive days for each individual. Significantly greater prevalence rates of asthma and chronic bronchitis were found in children from houses with HCHO levels 60-120 ppb than in those less exposed, especially in children also exposed to environmental tobacco smoke. In children, levels of PEFR decreased linearly with HCHO exposure,

with the estimated decrease due to 60 ppb of HCHO equivalent to 22% of PEF level in nonexposed children. The effects in asthmatic children exposed to HCHO below 50 ppb were greater than in healthy ones.

<http://www.ncbi.nlm.nih.gov/pubmed/2394203>