

THE FACTS FORMALDEHYDE



Formaldehyde is a sensitizing agent that can cause an immune system response upon initial exposure. Acute exposure is highly irritating to the eyes, nose, and throat and can make anyone exposed cough and wheeze. Subsequent exposure may cause severe allergic reactions of the skin, eyes and respiratory tract and can cause asthma-like respiratory problems and skin irritation such as dermatitis and itching. Formaldehyde is classified as Group 1 carcinogen by the IARC, meaning it is carcinogenic to humans (nose-cancer).

Where risks occur

Exposure to formaldehyde occurs in health care, funeral, textile and paper industry. Workers can inhale formaldehyde as a gas or vapor or absorb it through the skin as a liquid. They can be exposed during the treatment of textiles and the production of resins. In addition to healthcare professionals and medical lab technicians, groups at potentially high risk include mortuary workers as well as teachers and students who handle biological specimens preserved with formaldehyde or formalin.

More about the substance

Formaldehyde is a colorless, strong-smelling gas often found in aqueous (waterbased) solutions. Commonly used as a preservative in medical laboratories and mortuaries, formaldehyde is also found in many products such as chemicals, particle board, household products, glues, permanent press fabrics, paper product coatings, fiberboard, and plywood. It is also widely used as an industrial fungicide, germicide and disinfectant.

How symptoms can affect you

Breathing in formaldehyde a lot can lead to symptoms like a sore throat, coughing, scratchy eyes and nosebleeds. Some people are more sensitive than others, so an exposure that causes no problems for some people can make other people sick or uncomfortable.

Formaldehyde is known to cause cancer. The higher the level and the longer the exposure, the greater the chance of getting cancer (cancer of the nose and throat). Exposure to formaldehyde might increase the chance of getting cancer even at levels too low to cause symptoms.

Latency period between exposure and formaldehyde related nose-cancer varies strongly from 2 years for some acute types of cancer to up to 15 years.

What you can do

Perform proper exposure measurements so it is known when actions should be taken. Inform workers about the risks and preventive measures.

Best solution is to control exposure through design and engineering modifications, such as installing local exhaust ventilation. To prevent product release into the workplace, it may be necessary to use stringent control measures such as process enclosure. Label all mixtures or solutions composed of high percent formaldehyde. Personal protective equipment, such as respirators, is a short-term solution for reducing exposure and should only be used as last resort.

References: NIOSH, cancer.gov, CDC, CCOHS