safety focus

Formaldehyde

Formaldehyde is a colorless, flammable gas with a strong odor. It is used in liquid form as a water and alcohol solution called **Formalin**, and in solid form as **Paraformaldehyde**.

The most common use of it at OHSU is as a tissue preservative for pathological specimens in research, hospitals, and clinics. Formaldehyde also exists in engine exhaust, smog, and cigarette.

Hazardous formaldehyde gas may be given off by either the liquid or powder. You can inhale formaldehyde as a gas or vapor, or absorb it through the skin as a liquid. Exposure may result in the following symptoms: burning, tearing of eyes; skin irritation, coughing or difficulty breathing, and headache. Long-term exposures may result in sensitization (reaction at very low-level exposures), skin and eye problems, birth defects, and cancer.

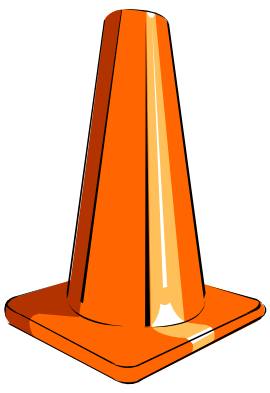
Anyone who works with the chemicals may be at risk, including lab and research technicians, healthcare providers, and chemical waste handlers. Areas that use formaldehyde must educate employees about the potential hazards. Safe work practices must be adhered to including:

* Training for those who use it.
* Access to Material Safety Data Sheets (MSDS).
* Use of personal protective equipment.
* Proper ventilation.

Areas that use concentrated formaldehyde should seek guidance from Environmental Health and Radiation Safety (4-7795) about regulatory requirements including OHSA Permissible Exposure Limits (PEL), monitoring requirements, and compliance methods.

The PEL for formaldehyde is 0.75 ppm, with a short term exposure limit (15-minute period) of 2 ppm. Eight-hour time weighted averages of 0.5 ppm trigger requirements for monitoring and medical surveillance.

While these concentrations are not common in healthcare, some research labs may quickly exceed these thresholds.



This information is a service of the OHSU Safety Committee (503 494-7795).
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