

U n i v e r s i t y o f C a l i f o r n i a
Environmental Health and Safety
Chemical Safety Update

S a n F r a n c i s c o

FORMALDEHYDE USE GUIDELINES

pub# CSU11

Formaldehyde is a colorless, flammable gas with a pungent odor that is detectable in low concentration (less than 1ppm). The aqueous solution that is purchased (Formalin) is generally 35-40% formaldehyde.

Common uses of formalin and formaldehyde include tissue fixing and preservation, disinfecting, fumigating, Northern Blots, RNA Gel and organic synthesis. Acute effects of exposure to formaldehyde may include eye irritation, mucous membrane and upper respiratory tract irritation, allergic respiratory and skin reactions, coughing, chest pains, difficulty in breathing, and pulmonary edema. Possible chronic effects of exposure to formaldehyde include cancer and hereditary genetic damage.

Medical surveillance is instituted for all employees who develop any of the signs and symptoms of overexposure listed above, all employees exposed to formaldehyde at concentrations at or exceeding the Short Term Exposure Limit (STEL), and for all employees exposed to formaldehyde in emergencies.

Safe work practices to guard against the signs and symptoms of overexposure include the use of formaldehyde in a chemical fume hood, avoidance of prolonged or repeated exposure, washing of hands thoroughly after handling, and keeping containers tightly closed when not in use.

While handling formaldehyde, safety goggles or face shields must be worn when there is a possibility of a splash hazard. Gloves are to be worn at all times when handling formaldehyde. Respirators shall only be used when personal exposure to formaldehyde has not yet been reduced below the Permissible Exposure Limit (PEL) and during emergencies.

Small spills of dilute formalin must be cleaned immediately. Cover the spill with absorbent material and scoop into plastic bags. **BE SURE TO WEAR GLOVES AND EYE PROTECTION.** If the amount or concentration of the spilled material causes eye, nose or throat irritation, immediately evacuate the area, close the doors and contact the Office of Environmental Health and Safety (EH&S) through the UCPD at **476-6911**.

The California Code of Regulations Title 8, Section 5217 for formaldehyde includes information regarding the PEL, exposure monitoring, regulated areas, housekeeping, hazard communication, record keeping and reporting requirements in addition to the information presented above. In addition to this information the Material Safety Data Sheet (MSDS) for formaldehyde includes information regarding first aid and fire fighting measures.

For detailed information see the MSDS on formaldehyde.

