

Formaldehyde

What is formaldehyde?

Formaldehyde is a colorless, strong-smelling gas present in a variety of building and household products. Formaldehyde is commonly used in resins to make pressed wood products such as particleboard and wood paneling. When these products are used in home construction or in furniture, they may release formaldehyde into the air.

Formaldehyde is used to make fabrics in permanent-press clothing and draperies, and was in foam insulation products that were common during the 1970s. Small amounts of formaldehyde may be released into the air by burning wood, kerosene, natural gas, and from cigarette smoke.

Formaldehyde in wood products and new construction

People may be exposed to formaldehyde from new wood products used in home construction. Urea-formaldehyde (UF) resins and phenol-formaldehyde (PF) resins are common in a variety of construction materials. Wood products made with UF resins give off more formaldehyde than wood products made with PF resins. UF resins are used in particleboard, hardwood plywood paneling and medium-density fiberboard. PF resins are used in softwood plywood paneling and materials produced for exterior construction.

Federal regulations and guidelines restrict the use of some building materials that give off large amounts of formaldehyde, especially in pre-fabricated and mobile homes. Formaldehyde emissions from wood products or fabrics decrease as products age. When these products are new, high temperature and humidity may increase the release of formaldehyde.

What are the effects of exposure to formaldehyde?

When present in air at levels above 0.1 parts per million (ppm), formaldehyde may irritate the eyes, throat and nose. Higher levels may be associated with nausea, chest tightness and wheezing. Inhaling formaldehyde may trigger asthma symptoms, and skin contact may cause rashes or sensitization. Sensitive individuals may experience skin or asthmatic reactions at very low levels. Occupational exposure to formaldehyde has been associated with an increased risk of lung cancer.

How can I avoid being exposed to formaldehyde?

- Choose building materials that are low in formaldehyde for home remodeling and construction projects. Choose furniture or cabinetry made of solid wood or softwood plywood can help reduce exposure.
- Use building products such as solid lumber or metal instead of particleboard.
- Increase ventilation when new sources of formaldehyde are brought into your home.
- Maintain moderate temperature and humidity levels when you have new building materials in your home.
- Consider washing permanent-press clothes and fabrics before you use them if you are sensitive to formaldehyde.
- Prohibit the use of tobacco products (e.g. cigarettes and cigars) indoors.

What should I do if I suspect a problem?

If you suspect you are being exposed to formaldehyde, take steps such as those described above to limit your exposure. Ask your builder or lumber supplier for products that are low in formaldehyde.

For more information

- Contact the Wisconsin Division of Public Health, Bureau of Environmental Health, PO Box 2659, Madison, WI 53701-2659, (608) 266-1120; or
- Visit the department's website, www.dhs.state.wi.us/eh



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