February 2000

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WHAT IS IT?

Formaldehyde is an important chemical used widely by industry to manufacture building materials and numerous household products. It is also a by-product of combustion and certain other natural processes. Thus, it may be present in substantial concentrations both indoors and outdoors.

Sources of formaldehyde in the home include building materials, smoking, household products, and the use of unvented, fuel-burning appliances, like gas stoves or kerosene space heaters. Formaldehyde, by itself or in combination with other chemicals, serves a number of purposes in manufactured products. For example, it is used to add permanent-press qualities to clothing and draperies, as a component of glues and adhesives, and as a preservative in some paints and coating products.

In homes, the most significant sources of formaldehyde are likely to be pressed wood products made using adhesives that contain urea-formaldehyde (UF) resins. Pressed wood products made for indoor use include: particleboard (used as subflooring and shelving and in cabinetry and furniture); hardwood plywood paneling (used for decorative wall covering and used in cabinets and furniture); and medium density fiberboard (used for drawer fronts, cabinets, and furniture tops). Medium density fiberboard contains a higher resin-to-wood ratio than any other UF pressed wood product and is generally recognized as being the highest formaldehyde-emitting pressed wood product.

HEALTH EFFECTS

Exposure to formaldehyde vapors can cause eye, nose and throat irritation; coughing; skin rashes; headaches; dizziness; nausea; vomiting and nosebleeds. Formaldehyde has also been shown to cause cancer in laboratory animals, and the U.S. Environmental Protection Agency (EPA) ranks formaldehyde as a probable human carcinogen. However, the most recent EPA estimate of the lifetime cancer risk associated with exposure to formaldehyde in homes is equal or less than 1 chance in a million of developing cancer.

REDUCING EXPOSURE TO FORMALDEHYDE AT HOME

Ask about the formaldehyde content of pressed wood products, including building materials, cabinetry, and furniture before you purchase them. If you experience adverse reactions to formaldehyde, you may want to avoid the use of pressed wood products and other formaldehyde-emitting goods. Even if you do not experience such reactions, you may wish to reduce your exposure as much as possible by purchasing exterior-grade products, which emit less formaldehyde.

Some studies suggest that coating pressed wood products with polyurethane may reduce formaldehyde emissions for some period of time. To be effective, any such coating must cover all surfaces and edges and remain intact. Increase the ventilation and carefully follow the manufacturer instructions while applying these coatings. (If you are sensitive to formaldehyde, check the label contents before purchasing coating products to avoid buying products that contain formaldehyde, as they will emit the chemical for a short time after application.)

Maintain moderate temperature and humidity levels and provide adequate ventilation. The rate at which formaldehyde is released is accelerated by heat and may also depend somewhat on the humidity level. Therefore, the use of dehumidifiers and air conditioning to control humidity and to maintain a moderate temperature can help reduce formaldehyde emissions. (Drain and clean dehumidifier collection trays frequently so that they do not become a breeding ground for microorganisms.) Increasing the rate of ventilation in your home will also help in reducing formaldehyde levels.