# Formaldehyde in Your Home

Recently studies have found elevated formaldehyde levels in homes due to wood flooring composites. Laminate floor is composed of wood or plastic veneer glued to a composite wood platform using a formaldehyde-based resin. According to the February 18, 2016 revised CDC report, formaldehyde levels are elevated in select versions of the laminate flooring and exposures to formaldehyde may be dangerous to your health.

## What is formaldehyde?

Formaldehyde is a colorless, strong-smelling gas that is highly reactive at a room temperature and is a common indoor pollutant. Formaldehyde is released into the home from variety of sources including wood burning, and cooking. Many wooden products such as plywood, pressed wood, and composite wood flooring use formaldehyde-based resins and glues. Eco-friendly wooden products, including wood flooring, cabinets, etc., may have been manufactured using formaldehyde-based resin as an adhesive as well.

## Effects of exposure to formaldehyde

Exposure to elevated levels of formaldehyde may cause burning sensation in the eyes, skin rash, nose, and throat irritation. It also may lead to respiratory problems such as coughing, and asthma-like symptoms. Other exposure symptoms include headache, nausea, and fatigue. Formaldehyde is classified as a human carcinogen.

## Sampling for formaldehyde

It is a good practice to test formaldehyde in a new or recently remodeled home. The general procedure for the wood flooring testing is to set up proper equipment approximately 5 feet off the ground and attach the monitor. The badge will collect the sample for 24 hours and will be sent out to the laboratory for a detailed analysis.

There is no formal formaldehyde floor emissions regulations in the United States. However, there is a rating system released in 2007 by the California Air Regulatory Board (CARB) to provide guidance. The Composite Wood Products Regulation is a California Air Resources Board (CARB) regulation that reduces public exposure to formaldehyde through the establishment of strict emission performance standards on particleboard, medium density fiberboard and hardwood plywood (collectively known as composite wood products). The regulation, adopted in 2007, established two phases of emissions standards: an initial Phase I, and later, a more stringent Phase 2 that requires all finished goods, such as flooring, destined for sale or use in

California to be made using complying composite wood products. As of January, 2014 only Phase 2 products are legal for sale in California. CARB studies suggest that up to 5% of formaldehyde emissions are generated by composite wood products. Refer to http://www.arb.ca.gov/research/indoor/formaldehyde.htm for further information the California Environmental Protection Agency web site on their Air Resources Board.

**Minimizing Risk Factors**

If sampling results come back high, there are proven solutions to reduce exposure to formaldehyde in the indoor air quality of your home. Such methods include increase replacing the pressed wood products with low-emitting formaldehyde.  Search for Composite Panel Association (CPA) or Hardwood Plywood and Veneer Association (HPVA) stamps on UF pressed wood products.  Products affixed with these stamps meet certain formaldehyde emission standards ventilation and reduce humidity levels. Air out products containing formaldehyde before bringing them indoors to your home or business.

In conclusion, if the individuals residing in the room, facility or building experiences any health sensitivity or symptoms, then consideration should be to conduct airborne formaldehyde testing to determine the concentration and then act on various means to reduce exposure.

For more information contact PHASE Associates. Our indoor air quality specialist will visit, assess the potential hazardous conditions, collect airborne formaldehyde vapors as necessary, interpret and discuss the results for necessary ways to reduce exposure.

**References**

http://www.cdc.gov/nceh/laminateflooring/