

Formaldehyde Fact Sheet

How is Formaldehyde Used?

Formaldehyde is widely recognized as a biologic preservative (embalming fluid). It is used in the production of plastic products, vaccines (polio), medicine, adhesives, paper towels, cosmetics, insulation, computers, automobiles, building products, furniture, cabinets and textiles, among hundreds of products.

Cabinet manufacturers use composite wood (a positive environmental story) that extends the yield from the harvest of trees and makes cabinetry more affordable. The best performing adhesives used to make composite wood contain small amounts of urea formaldehyde.

How Important is Formaldehyde to the Economy?

Formaldehyde is of critical economic importance to the U.S. economy, including housing and construction, automobiles, aircraft, health care, and other applications. Formaldehyde directly impacts the employment of 600,000 U.S. workers and indirectly impacts an additional 3 million U.S. jobs.

Formaldehyde in Wood

All wood species, and therefore all wood products, contain and emit small amounts of formaldehyde. An oak tree, for example, emits 9 parts per billion (ppb) of formaldehyde. It follows that any wood cut from that oak tree also contains small amounts of formaldehyde, as do all wood products. Formaldehyde also is found naturally in a wide range of fruits, vegetables, mushrooms, seafood, meats and coffee.

All cabinetmakers use composite wood in the construction of cabinets. It is an essential material for industry products. Composite wood generally is made with urea formaldehyde adhesive in order to achieve the durability and performance

expected by consumers in the difficult kitchen environment that varies exposure to extreme heat, cold, diverse cooking products (mustard, ketchup, alcohol, and the like), detergents, water and heavy usage.

What is the Environmental Impact of Formaldehyde?

Formaldehyde occurs naturally in the environment with natural processes contributing up to 90 percent of formaldehyde found in the atmosphere. Formaldehyde is found in human breath. Formaldehyde does not accumulate in the environment or in the human body. Normal metabolic processes prevent accumulation.

Does Formaldehyde Cause Cancer?

Formaldehyde has been widely studied by scientists for over thirty years. In 2004, the International Agency for Research on Cancer (IARC) classified formaldehyde as “carcinogenic to humans,” specifically the extremely rare nasopharyngeal cancer. The principal study depended on to reach the conclusion was of workplaces with decades old worker exposures not at all representative of today’s workplaces. It is thought by many scientists that causes other than formaldehyde were the true cause.

More recently, in April, after extensive review of the science and process used by EPA to support proposed regulation of formaldehyde at a level less than readings sometimes found in human breath or the background environment, the National Academy of Sciences found no link to leukemia and questionable linkage to other cancers. This report by independent scientists was followed by the release of a report by the U.S. Department of Health and Human Services in early June, using the same science as EPA. HHS, however, listed formaldehyde as a “known” human carcinogen despite the weight of scientific evidence not supporting a conclusion that formaldehyde causes leukemia. **Less publicized was the clear statement by HHS that, “A listing in the Report on Carcinogens does not by itself mean that a substance will cause cancer. Many factors, including the amount and duration of exposure, and an individual’s susceptibility to a substance, affect whether a person will develop cancer.”** Further, the American Cancer Society has said that not all carcinogens cause cancer. The rate of exposure still is a key factor. Also, the American Cancer Society has said that only 8% of cancers are caused by environmental exposure and the majority are caused by occupational exposure.

The NAS report was clear in its conclusion that the levels of formaldehyde to which most consumers are exposed pose no risk. The HHS report states that, “The mechanisms by which formaldehyde causes toxicity at distal sites are unknown.” In other words, there is no known causal connection. This, quite predictably, has resulted in a strong reaction to the “known” conclusion by a wide array of independent expert scientists who believe the finding is flawed and actually reflects opinion more than science.

Action to Manage Formaldehyde Exposure

HHS recommends that consumers do the following to prevent exposure to formaldehyde:

1. Use lower-emitting pressed wood products, such as those that are labeled CARB (California Air Resources Board) compliant, or made with ultra-low-emitting formaldehyde (ULEF) or no-added formaldehyde (NAF). Cabinets displaying the KCMA Environmental Stewardship Program (ESP) certification seal must use at least 80% CARB compliant pressed wood (most already 100%). Beginning 2013, all pressed wood sold in the U.S. must be CARB compliant. The CARB product emission standards are the lowest in the world.
2. Increase ventilation, particularly after bringing new sources of formaldehyde into the home. Open windows and use fans to bring in fresh air. The kitchen and bath generally already are the best ventilated rooms in a house with frequent air exchanges the norm.
3. Use air conditioning and dehumidifiers to maintain moderate temperature and reduce humidity levels.

KCMA ESP certified cabinetry meet the HHS guidelines for managing formaldehyde exposure in addition to other environmental benefits. And, as stated in the NAS report, the emission levels from kitchen cabinets to which most consumers would be exposed are well below thresholds that would cause harm.

July 2011