

Can Flooring Be Hazardous to Your Health?

THE CONSUMER is faced with a bewildering variety of flooring products.

In the 1950s, the choices were natural linoleum, vinyl tile, hardwood, painted floors, area carpets (wool and synthetic) and ceramic tile. In 2015, choices include natural rubber, bamboo, engineered wood, cork, wall to wall carpet, laminate flooring, sheet vinyl, vinyl tile.



The criteria for selection include appearance, durability, cost and *now potential impact on indoor air quality*. In March 2015, a large distributor of laminate flooring was accused of producing with excessive formaldehyde emissions. In response to numerous consumer complaints, the distributor offered in-home formaldehyde testing using approved methods with analysis by accredited laboratories. Although 26,000 test kits were mailed to owners of the product, 11,000 were returned. Of these, 3400 kits were tested from 2600 homes. The management announced that 97% of the homes were less than the World Health Organization recommended indoor air quality limit of 0.1 mg/M³ of formaldehyde gas. The remaining 3% were contacted for additional testing and resolution.

All of the accusations and reactive testing that followed, occurred more than 5 years after Congress and the President signed legislation regulating Formaldehyde in composite wood products. However, in part due to the efficacy of interested commercial lobbies, the rules were not ultimately promulgated by the Environmental Protection Agency (EPA) until March of 2016.

The forces that delayed this regulation include the flooring products industry, the wood industry, the chemical industry and the furniture industry. The purpose of the regulation is to control the emissions of formaldehyde from hardwood plywood, particle board, engineered wood products, and products made from these materials.

Formaldehyde is just one of several volatile organic compounds known as Volatile Organic Compounds (VOC's) that are emitted from the adhesives and other treatment chemicals used to manufacture several types of flooring.

Vinyl sheet and tile flooring is made flexible by a family of plasticizers known as phthalates. These phthalates, are emitted as vapors from the floor covering, can be removed by wiping the surface and are contained in dust particles on the floor. Phthalates are in many types of plastic products, many used to store and process food and water. Phthalate exposure is widespread in the US population. EPA states that the health effects are unknown. Other federal agencies take a different approach and state that scientific investigations to date have not revealed any health effects of low levels of phthalates at the levels found in the US population.

The Resilient Floor Covering Institute has developed the FloorScore IAQ Certificate that rates flooring for the emission of VOCs.

If engineered wood products including bamboo and laminate products all contain formaldehyde based adhesives and glues, is carpeting a more healthful choice? Possibly. However, you need to research the information from the Carpet and Rug Institute and assess possible emissions from synthetic fibers (wool has no emissions), foam carpet pads, rug cleaning chemicals and the soils and dirt that is collected by the carpets during its useful life.

What is the most healthful floor material for your home?