

Improved Indoor Air Quality with Green Label Carpet

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In the past several years, the U.S. Environmental Protection Agency (EPA) has detailed a growing body of scientific evidence indicating that the air within homes and other buildings can be more seriously polluted than outdoor air in even the most industrialized cities. Additional research indicates that people spend approximately 90 percent of their time indoors.

People who may be most susceptible to the effects of indoor air pollution also tend to be those who spend more time indoors, including the young, the elderly and the chronically ill, especially those suffering from respiratory or cardiovascular disease.

As a builder, there are many decisions that you can make relating to the products used in the construction and finish of the home that directly impact indoor air quality. Most homes contain products and materials that emit volatile organic compounds (VOCs), which can

pose a risk to the health of residents. These are particularly common in synthetic materials and products containing adhesives.

In the EPA TEAM (Total Exposure Assessment Methodology) study, researchers examined 12-hour indoor and outdoor exposures to VOCs in 650 houses in six U.S. cities. VOC levels were three to nearly 100 times greater indoors than outdoors. The study concluded that “personal exposure to these toxic and carcinogenic chemicals are nearly always greater—often much greater—than outdoor concentrations. We are led to the conclusion that indoor air at home and at work far outweighs outdoor air as a route of exposure to these chemicals” (Wallace 1987).

One ubiquitous product in new homes that often emits VOCs is carpet. In a typical carpet, toxic chemicals may be found in the dyes, fiber bonding material, backing glues, fire retardants and stain resistant treatments. The

EPA has stated that a typical carpet sample contains at least 120 chemicals, and those chemicals can outgas for up to three years after installation.

Fortunately, finding low VOC carpet, carpet pads and adhesives is easy: all of the top five carpet manufacturers in the country have multiple products certified under the Carpet and Rug Institute’s Green Label and Green Label Plus criteria to identify carpet that has been tested by an independent laboratory and has met the standard for low-VOC emissions. To be certified, each carpet sample is tested by an independent laboratory in Atlanta, Air Quality Sciences, and re-tested quarterly to assure continued fulfillment with the Green Label requirements. The maximum carpet emission factor for total VOCs is 0.5 mg/m³*h. Similar standards apply for carpet pads and adhe-



sives. Since the Green Label program began in 1992, the carpet industry has made substantial reductions in the total VOCs and 4-PC emissions.

Green Label carpets are available in every price range and style. In fact, leading manufacturers such as Interface, Milliken and Shaw have certified their entire product lines as Green Label. As an example of the limitless design options avail-

able, the carpet supplier for metro Atlanta builder Hedgewood Homes upgraded all of their carpets to Green Label six months ago because they are aware of Hedgewood's commitment to sustainable building practices. The design team could not tell the difference in quality, style or price.

Hedgewood Homes also sees a marketing advantage in providing home buyers improved

indoor air quality with Green Label certified carpet. Sales agents are trained to use the familiar "new car smell" analogy to discuss VOCs in building materials that can produce a "new house smell," with potential negative impacts on occupant health. As rates of respiratory disease continue to increase, especially among children, home buyers are more educated about and attracted to builders who are sensitive to their indoor environments and who demonstrate that they are looking out for the long term health of the family years after the home has been occupied.

Additional information regarding the Carpet and Rug Institute Green Label and Green Label Plus certification programs and lists of certified products can be found at www.carpet-rug.org. ■

Wallace, L.A. 1987. "The Total Exposure Assessment Methodology." Project Summary. EPA report no. EPA/60/S6-87/002. Washington: Environmental Protection Agency, Office of Acid Deposition, Environmental Monitoring and Quality Assurance.

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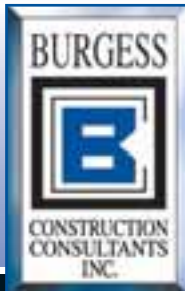
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