Mold-Resistant Interior Panels: An Important Part of an Overall Building Solution

By Chris Beyer

Mold. It's an unsettling issue that confronts drywall contractors and distributors quite often these days.

Talk of mold seems to be everywhere. Articles about construction damage or contamination due to moisture intrusion and the resultant growth of mold are front-page stories in trade journals and mainstream newspapers. And the fact that mold growth is caused by a variety of factors...
can certainly create confusion for contractors and suppliers.

One way to prevent possible mold problems in interior walls is to thoroughly understand the issue and the potential solutions currently available in the industry.

Mold development can result from any source of water—from leaky pipes or air conditioners to moisture that becomes trapped in wall cavities because of non-breathable material on the walls. With so many different scenarios as to why mold can be found in interior walls, you might think mold growth can flourish virtually anywhere. However, that’s just not true. In order for mold to grow, four conditions must be present simultaneously: sufficient moisture, the correct temperature range, mold spores and an available food source. Remove any one of these four factors, and you remove the potential for mold growth.

The preferred food sources for molds are organic materials. Recognizing this, manufacturers of gypsum board panels have developed new drywall products that reduce the amount of organics and thus reduce the food source for molds. Products that feature inorganic materials not only help contractors address the mold issue, they also reduce the time and expense of replacing or repairing alternative products if they become wet and at risk of growing mold.

One new gypsum board product on the market has a traditional paper face but uses fiberglass mats on the back of the board, the side exposed to the stud cavity. The theory here is that it is what’s behind the wall that you can’t see that can become troublesome. By the time you realize—if you ever do—that there is an intrusive moisture problem behind the walls, mold may have already gained a foothold there.

Another new interior panel product goes a step further by removing the paper from both the front and back of the board and reducing the organics in the core of the board. Utilizing fiberglass mat facings on both sides, the result is a highly inorganic board that provides superior protection from moisture intrusion problems. With the highest resistance to mold on the market, this board is ideal for hospitals, laboratories, schools, healthcare facilities and other structures where the concern for exposure to mold growth may be particularly significant.

How do you know if your gypsum board offers resistance to mold growth? The American Society for Testing and Materials is an independent agency that establishes test protocols so manufacturers can demonstrate that specific products meet specific standards. The test for mold growth, ASTM D3273, is the standard test method used by most companies in the building products industry.

During this four-week test, a sample of the subject material, such as a gypsum board, is placed in a closed chamber along with potting soil and mold cultures. With a constant temperature of about 90 degrees and relative humidity of 95 to 98 percent, the environment is ideal for mold growth. Each week, the testing laboratory monitors the gypsum board and measures the extent, if any, of mold growth.

At the conclusion of the test, the product is reviewed on a scale of one to 10, one being a high degree of mold growth and 10 being virtually free of visible mold. The higher the ASTM D3273
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rating achieved by a product such as a gypsum board, the more resistant it is to mold growth. The new two-sided fiber-glass mat product described above scores a 10, the highest rating.

While there is no single solution to resolving potential mold growth problems in construction, the industry is developing a number of best practices. By taking immediate corrective steps in the event of a leak, properly venting appliances, checking out condensation spots and using products engineered to resist the growth of mold, contractors and distributors should be able to rest easy.

About the Author
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