Mold Inhibitors May Keep You Out of Court

Does Saving Pennies Expose Your Business to Risk?

By: Steven Ferry

For as long as there have been homes, there have been basements. And with basements come all the problems of waterproofing, mold growth and upset homeowners. Is there a way to protect them and your own business, reducing liabilities that can eat into your bottom line and even force the doors of your business to close?

Let’s look at some facts: With 50 percent of U.S. homes containing problem molds and a 1,300 percent increase nationally in mold insurance claims between 2001 and 2004 (and an increase in payouts between 2001 and 2003 from $1.3 billion to $3 billion), it is no surprise that beginning in 2002, insurers began to add mold exclusions and even pull out of states where they were being hit hardest.

It is also no surprise that lawyers are looking upon “mold as gold” and “the next asbestos wave” with multi-million dollar awards having been made since the landmark 2001 award in Texas for $32 million (later reduced to $4 million). We now live and work in an industry where homeowners are not only suing for the cost of repair and remediation, but also compensation for health risks and bodily injury. For instance, 17 companies settled with a California couple for $22.6 million in November 2005, claiming moldy lumber caused their child brain damage.

Obviously, basements are not the only location for mold in houses. Moldy basements are being caught up in an insurance clampdown and legal showdown. If the legal route isn’t pursued, it typically costs $10,000–$20,000 to clean surfaces and contents of mold in basements in mold remediation—not to mention restoration costs, customer good will and unfavorable word of mouth, which can be exponentially higher. But what is at the root of the problem?

The Great Disappearing Act

What homeowners do not know about the waterproof coatings below their homes and the mold that grows via their leaky basements, is what greets every general contractor when he pulls back the earth from a foundation wall to fix a leaking basement: The protective coating has invariably and mysteriously disappeared.

So what do contractors do? They slap on some more asphalt per the building codes and backfill the dirt. The cycle repeats when the leaks return in as little as two years, even though the protection is expected to last for the life of the structure.

Too few people question the use of asphalt as a long-term waterproofing medium, even when it doesn’t provide effective waterproofing for more than a few years.

Why the Asphalt Keeps Disappearing

Jim Copeland, a lifelong research and development chemist, became aware of the existing problem that millions of homes face concerning damp basements and mold growth. In fact, he had a pretty good idea what the problem was once he was briefed on the disappearing-asphalt protective layer.
The Asphalt Institute lists on its Web site the following moisture damage mechanisms: detachment, displacement, spontaneous emulsification, film rupture, pore pressure and hydraulic scouring. None of these came close to what Copeland discovered: asphalt has one critical element that has been overlooked in any effort to resolve its shortcomings as a waterproofing: It is edible to bacteria—the exact bacteria that live in and around most homes. Asphalt is biodegradable! And why not? It is just degraded plant matter (plankton) that died in prehistoric times.

Why It Keeps Happening

Copeland’s hunch was confirmed when he commissioned a study of peer-reviewed scientific literature. It turns out that throughout the 1980s and 1990s (but beginning as early as 1962), numerous investigators conducted extensive research into the biodegradation of a wide range of asphalt-containing materials—from roadbeds to tank/pipeline coatings to below-grade foundations. They found significant and extensive biodegradation by soil microorganisms over time, sufficient to compromise the functionality of the asphalt materials. The result is the mysteriously crumbling roadbeds (eaten from the bottom up), corroded underground tanks/pipelines, and leaking foundations that construction and other crews have grown accustomed to seeing in older structures and equipment.

The five main species of microbes associated with bacterial decomposition of asphalt-based coatings are all commonly found in soil, and are well known for their differing abilities to metabolize and decompose a broad range of organic substrates such as asphalts. Warm and moist soils are particularly rich in these bacteria, leading to more rapid degradation of any asphalt products exposed to them.

Asphalt or Your Fault? The Courts Don’t Care

Given that asphalt is food for microbes is really not news to microbiologists and is something that builders should know. The drama unfolding beneath the ground has left homeowners suffering their own drama: Until recently, they have been able to pass on the cost of re-waterproofing and even mold remediation to insurance companies. But with the growth of mold showing up on the media, insurance and legal battlegrounds, homeowners have been left to their own devices concerning fixing basement moisture and mold.

Mold spores exist on all surfaces and spaces in a dormant state, just waiting for the right food, temperature and moisture conditions to explode into an eyesore and health hazard. So when a building system directly brings about mold-creation in homes—such as water intrusion through unprotected foundation walls—and insurers are nowhere to be seen, lawyers can be predicted to circle in full anticipation of another financial killing.

One day, slowly evolving building codes will reflect the need for effective below-grade damp- and waterproofing. Until this happens, however, general contractors relying on current codes are exposing themselves to hundreds or thousands of homeowners angry that short-term products were installed as faulty long-term solutions—the liability soaring as the mold health issue is added to the mix. Certainly moving forward with new construction, any general contractors pleading ignorance or “I was just following codes” may find himself the only one left standing red-faced when the music stops.

Best Practice: Products that Work

Until the building codes catch up, a new best practice might be the smarter approach: switching specifications from asphalt-based solutions to some other damp-proofing or waterproofing material such as polystyrene-based polymers that microbes do not consider to be food. These plastics have been extensively examined in biodegradation and environmental studies and found to be highly resistant to microbial decomposition. When engineered into a flexible and durable form, they work well as waterproof coatings below ground throughout the life of a structure.

Products, such as those now produced by Rub-R-Wall (www.rubrwall.com) or Poly-Wall (www.polywall.com) are addressing the problem head-on. Poly-Wall manufactures materials that are particularly unsusceptible to microbial decomposition in its water-proofing and damp-proofing products, such as thermoplastic coatings for exterior walls. In addition, the company has developed a product for combating mold on the inside of foundation walls that is definitely worth looking at for contractors. It contains their proprietary ProBan (patent pending), and is the first additive for damp-proofing coating products on the market that inhibits mold on those surfaces from...
proliferating even when the temperature, moisture and food conditions are all ideal for a mold invasion. Air barrier products with ProBan will inhibit mold growth, enabling above-grade and below-grade solutions that finally promise to give contractors, architects, homeowners and property owners the help they need in combating mold.

Such mold inhibitors just might be the solution that not only keeps the mold at bay, but contractors and angry homeowners out of the courtroom.

About the Author
Steven Ferry is a Clearwater, Fla.–based writer for the construction industry.

References


