

# Builders considering more anti-mold techniques, products

By Alan J. Heavens  
THE PHILADELPHIA INQUIRER

PHILADELPHIA — There are better ways to build a house, especially if you want to keep mold under control, Charles Perry believes.

“Mold is a huge issue for my clients, especially lenders, since they have 80 percent exposure to the problem through (the) mortgage, compared with the homeowner’s 20 percent equity,” said Perry, principal of Environmental Assurance Group, a lending and real estate consulting firm, in West Hartford, Conn.

So when some clients suggested that Perry make the year-round house he was planning to build on the site of a lakeside summer cottage in Chesterfield, N.H., a showcase for mold-resistant construction techniques and products, he agreed.

“I said I’d be happy to do it but that because this was my house, I’d establish the ground rules.”

The result is a “mold-safe model home.” Completed in September, it was built in conjunction with the Partnership for Advancing Technology in Housing (PATH), which will monitor how the house performs over time. Products and techniques used were chosen based on his research and PATH’s input, Perry said. With his approval, PATH brought some manufacturers into the project.

Mold-prevention strategies are considered prohibitively expensive by a lot of builders. Perry begs to disagree, though he declined to put a price tag on the 3,000-square-foot, two-story structure.

“In a house costing a quarter of a million dollars, paperless drywall represents one-half of 1 percent, or \$1,250,” Perry said.

“I spent \$2,500 on a commode and two light fixtures for one of the bathrooms. Is \$1,250 too much to invest in an effort to get mold coverage put back into homeowners’ insurance policies?”

Mold thrives most often in moist conditions, which — combined with a nutrient source such as soil, dust, and products that, like conventional drywall, contain cellulose or other dead

organic matter — provide the ideal environment for colonization.

Though indoor-mold problems have always existed, they were aggravated by changes in home-construction techniques wrought by the energy crisis of the 1970s. Creation of energy-efficient houses in which the air inside is not regularly exchanged has been linked by the American Lung Association to a dramatic increase in asthma cases in the last three decades.

Correcting moisture problems is often the best way to stop mold growth. Depending on the extent of damage, though, cleanup costs can run into the tens of thousands of dollars. After several high-profile lawsuits over costs involving homeowners and insurance companies, many insurers dropped mold coverage completely from standard policies or began requiring special and expensive riders with higher deductibles.

Building products have been developed that resist mold or create barriers to the moisture it needs to thrive. Many of them were used in Perry’s mold-safe house in Chesterfield:

Georgia-Pacific’s DensArmor Plus paperless wallboard, listed for microbial resistance by the Greenguard Environmental Institute, was installed with inorganic glues and tapes (information at [www.gp.com](http://www.gp.com)).

The wallboard and all the wood in the house were coated with an antimicrobial spray developed by American Mold Guard ([www.americanmold-guard.com](http://www.americanmold-guard.com)).

The house and roof were wrapped in Dupont’s Fiberweb Typar ([www.typar.com](http://www.typar.com)), which acts as an air and moisture barrier while simultaneously allowing moisture vapor to escape from the wall cavity to the outside. It was installed before the exterior siding, which was natural cedar in keeping with the rural, lakefront view.

The Western red cedar siding was sprayed with a specialized coating made by Cabot ([www.cabotstain.com](http://www.cabotstain.com)).

The Typar housewrap was covered with Home Slicker, a ventilating, self-draining rain screen made by Benjamin Obdyke Inc., which has its headquarters in Horsham, Pa.

Home Slicker drains moisture from behind the siding and down the house, reducing the chances of premature peeling or blistering of finishes. It allows about three-eighths inch for airflow ([www.benjaminobdyke.com](http://www.benjaminobdyke.com)).

CertainTeed, based in Valley Forge, Pa., provided its Optima insulation for the walls of Perry’s house, and its DryRight insulation for the ceiling cavities, both of which are designed to deny mold a food source. The insulation is covered with CertainTeed’s MemBrane, a permeable vapor barrier ([www.certainteed.com](http://www.certainteed.com)).

Residential builders have not capitalized on these products, Perry said, “since (they) are afraid of being first, and don’t want to be known as higher-cost producers.”

“They are not going there, they don’t want to be cutting-edge, they want to do it the way they have always done it because that’s the way they always have done it.”

Taking the opposite view is Gary G. Schaal, director of sales and marketing for Paparone Homes of New

Jersey.

“Builders are concerned about health and litigation issues, so the construction techniques and materials we use are designed to deter mold growth,” Schaal said.

“Some builders put dehumidifiers in houses if they know the buyers will be finishing the basement at some point,” he said. “They coat the exterior basement walls with waterproofing systems such as Tuff ‘n’ Dri, and, in most cases, the residential industry has shifted from porous concrete block to less porous poured concrete, to prevent moisture intrusion.”

In townhouse construction, Schaal said, “if the builder uses Sheetrock between the units instead of block walls, the procedure is to spray the sheets with a bleach product to kill anything that could have grown if they were exposed to moisture.”

In existing homes, said Jim Mellon, president of Mellon Certified Restorations in Yeadon, Pa., “the sources of the mold have to be located, the areas have to be contained, material removed under controlled circumstances, then vac-

uumed, washed and vacuumed again.”

Drywall is porous, and if there’s mold it will spread, Mellon said. Mold can be cleaned from hard furniture such as tables, but soft furniture like couches have to be discarded.

Residential mold doesn’t get quite the same attention now that it got a few years ago, but that doesn’t mean the issue has gone away, Perry and others said.

“If the house smells, it is a problem that must be dealt with,” said Michael McCann, an associate broker at Prudential Fox & Roach’s Center City Philadelphia office. “Even if testing doesn’t find mold, sellers have to disclose any and all moisture problems, because if they don’t disclose, there’s always the chance of a lawsuit by the buyers.”

Still, McCann said, buyers haven’t requested mold testing in any of the houses he’s sold in the last six months to a year.

“If there is no odor involved but the home inspector notices it, he’ll tell the buyer to have someone check it out.”

## Bright little ideas to put the sun to work at home

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You may not be able to spend thousands of dollars to convert your house to solar power right now. But there are smaller, less expensive ways to do your environmental part with the sun’s help.

Many solar products are available, though there are limits to what some can do. Still, anything to reduce your carbon footprint is worth doing.

**Solar computer bag:** Voltaic Systems’ Generator bag (\$499, [www.voltaicsystems.com](http://www.voltaicsystems.com)) uses the sun to charge a computer notebook. The battery pack included stores a charge that will deliver the required power automatically. Also included: adapters for cell phones and other portable equipment.

**Solar charger:** Solar Style’s SC002NBC (\$59.99, [www.solarstyle.com](http://www.solarstyle.com)) will charge cell phones, PDAs, MP3s, handheld video games and digital cameras, as well as operate radios, CD players and other portable devices. It also has an emergency light and can be used with a car adapter or plugged into a regular outlet.

**Wireless speaker:** With the Arius solar-powered wireless speaker (\$260, [www.novatech-gadgets.com](http://www.novatech-gadgets.com)), you can have music outside without running wires. You can even plug an iPod directly into the weatherproof speaker. Fifteen watts of sound are produced; technology and signals are transmitted through walls, floors and ceilings up to 150 feet away. Once fully charged, the speaker lasts eight to 10 hours.

**Water bottle:** During the day, the bottle stores a solar charge (the water doesn’t heat up); at night, it’s a spare LED lantern (\$19.95 [www.nexusgadgets.com](http://www.nexusgadgets.com)).

**Portable multiband radio:** This unit (\$69.95, [www.global-merchants.com](http://www.global-merchants.com)) has four short-wave bands, a medium-wave band, FM, two television bands, and a weather band. It can be powered by the sun, by dynamo (cranking), battery (not included) or AC/DC adapter (included).

**Bluetooth car kit:** Iqua Vizor SUN (\$110, [www.store.apple.com](http://www.store.apple.com)) is a hands-free speaker that clips onto the visor and uses solar power to recharge. When your visor’s up, the solar panel doesn’t get any sun, however. Battery life is 20 hours. Dedicated buttons let you answer and end calls and access other features.