EIGHT-PENNY NEWS

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Update: U.S. Gypsum Pulls EIFS Product

Systems With Drainage OK, Says Company

Fallout from the controversy surrounding exterior insulation and finish systems (EIFS) continues. In a recent move, U.S. Gypsum, Inc., a major manufacturer of EIF systems, has pulled its "barrier EIFS" from the market after concluding that they are impractical. (Barrier EIFS relies on a continuous waterproof exterior surface to protect against rain and humidity, but provide no exit for water that may penetrate the surface.)

However, U.S. Gypsum says it still has faith in its "water-management finish systems," which — unlike EIFS — have flashing, drainage plane, and weep-hole details designed to allow water that penetrates beneath the surface to escape from the system instead of remaining within the wall (see drawing at right).

U.S. Gypsum says its water-management systems give builders the visual advantages of EIFS — a stucco-like look and the ability to imitate a variety of decorative architectural details — without the moisture problems.

Workmanship. Although some defenders of EIFS have blamed particular installer practices for the high occurrence of problems in North Carolina, U.S. Gypsum said in its press release that "the

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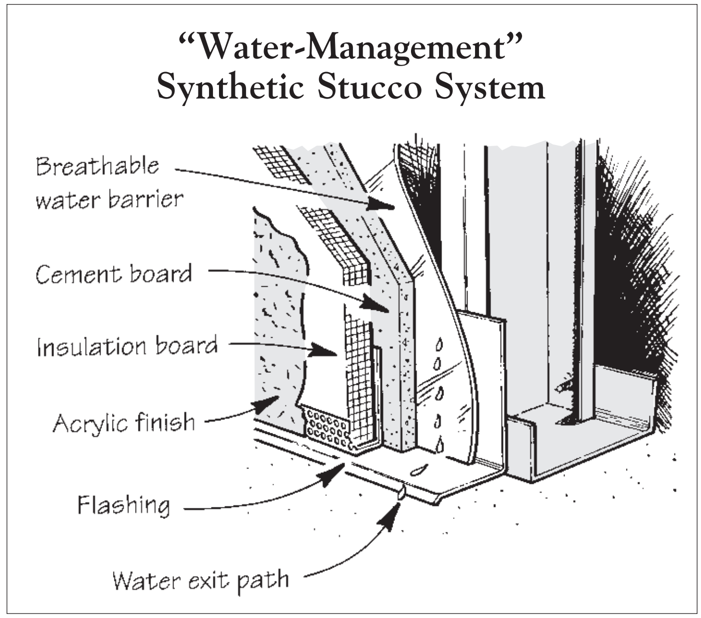

The U.S. Gypsum "water-management" synthetic stucco wall system includes a drainage plane and flashing beneath the foam-and-acrylic exterior.

Beyond Low-VOC

by Andrew Dwyer

Painters Praise Low-Odor Formulas

Low-odor paints, on the market since 1992, have proved effective in a wide range of interior uses. Knocks against low-odor formulas — they dry too fast, cost too much, and so on — are generally passed on by those who haven't tried the product. But painting contractors in the field who have given low-odor paints a chance report good results.

The science of low-odor. The odor in paint emanates from the solvent that helps the paint dry and cure. By removing the solvent, manufacturers have gotten rid of most of the odor. To replace the solvent's curing properties, manufacturers created a binder that hardens and forms a film after the paint is applied.

Solvents are also designed to slow down a paint's dry-time. With the solvent gone, the added binder must also recreate the solvent's drying qualities. Manufacturers have succeeded in nearly matching a solvent's effect on dry-time.

WILLIAM HOPKINS

New low-odor paints are ideal for occupied rooms, say painters. Any slight odor reportedly dissipates within minutes.

Because they have almost no solvents, low-odor paints are low in volatile organic compounds (VOCs). In fact, while coatings made to meet expected EPA regulations limit VOC content to 250 grams/liter, low-odor paints go far beyond that standard and reach a VOC content of less than 1 gram/liter.

It is impossible to remove 100% of the solvent, and there is still some odor to low-odor paints. But contractors we talked with characterized the smell as a slight odor that dissipates within 15 minutes.

Product choices. There are

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STATE BY STATE

California. Los Angeles' toilet change-out program has paid off in lower sewer hookup fees, according to an article in the April 10 *L.A. Times*. The 620,000 low-flow toilets installed city-wide have cut total water usage by 25,000 acre-feet per year. As a result, an average home's sewer fee will drop from about $2,374 to about $810.

Nevada. Joseph Dear, director of federal OSHA, recognized Nevada's state OSHA program in February with a "Team Impact Award." The federal award has never before gone to a state-run program. Although Nevada tops all the states in dollar value of fines imposed, federal officials have held up Nevada OSHA's negotiations with builders over fall protection as an example for other states.

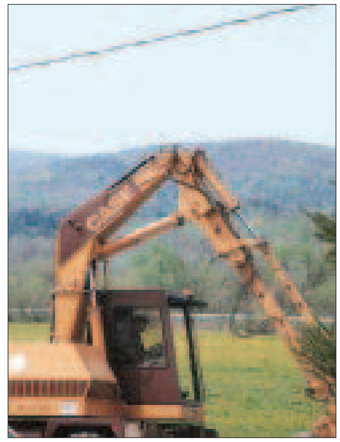
Florida. A state appeals court has ruled that a roofing foreman who walked off the job rather than shave is not entitled to unemployment compensation, according to March 15's *PHC Profit Report*. The court accepted the employer's argument that since employees have to deal directly with customers, a policy that employees must present a neat appearance was reasonable.

Crane Safety Warning: Beware of Electrocution

On a residential site, cranes aren't the everyday item that they are on big industrial jobs. When you do use a crane, one hazard you might not think of is the chance that the crane could contact a power line and expose someone to high-voltage current.

But according to a study from the National Institute for Safety and Health (NIOSH), such accidents killed an average of 15 people annually during the '80s, some on residential jobs.

In one case, a crane truck was delivering concrete block to a home with a steep driveway. Parked on the site under a power line and controlling the boom with a remote, the driver accidentally allowed the boom to touch the wire. The high-voltage juice completed its path to ground through the remote and the driver, killing the man. When the company president, who had been watching, attempted to help the driver, he touched the truck and was also killed.



Boom trucks, cranes, and backhoes on the job pose an often unrecognized hazard. Contact with an overhead power line can be fatal.

You don't have to touch a power line to be injured, points out March/April's *Building Safely Quarterly*. High-voltage electricity can jump to you or your equipment. For that reason, equipment should be kept at least 10 feet away from energized lines, or even farther if the line voltage exceeds 50 kilovolts.

To be safe, recommends NIOSH, size up the job site for power line hazards, train workers in OSHA requirements and safe practices, and work with extra care around power lines. Notify the utility when you're working around its lines, and ask its help to shut off the power if necessary. And in any event, always assume that all lines are hot. □

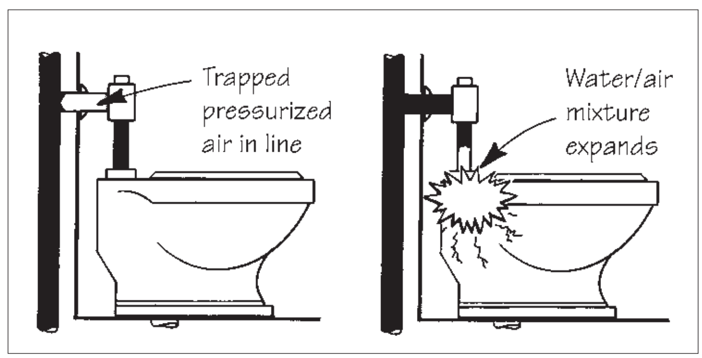
Exploding Toilets Plague New York

According to Murphy's Law, anything that can possibly go wrong will — and at the worst possible moment. Even so, few of us expect a toilet to explode when we flush it.

So New York City apartment dwellers were taken completely by surprise when water pressure blasted several toilets into fragments after old, water-wasting units were replaced by new low-flush models.

Although it may sound funny at first, the problem is serious, investigators report. The blast force was enough to damage lights and wall finishes, and even injure people in the room.

The problem has been reported only in toilet models equipped with "flushometer" valves, not in-tank type fixtures. But investigators say installation details rather than toilet design explain the unexpected explosions.



The problem starts when plumbers neglect to bleed all the air from the water supply pipes after replacing an old unit. Although water under pressure does not change in volume, pressurized air compresses and, like a coiled spring, stores energy.

When pressurized air trapped in the water lines supplying a toilet escapes through the valve during flushing, it expands violently, creating a high-energy spray of water and air that can be powerful enough to shatter the vitreous china of the fixture.

Engineers at JB Engineering, in Munster, Ind., say they were able to replicate the phenomenon in the laboratory with all the major toilet brands. Their recommendation is standard practice in the plumbing trade already: When replacing a toilet or other fixture, bleed all air from the water lines before leaving the job. □

Learning the Lien Laws

Ever had a problem getting paid by a customer? (Don't all talk at once.)

Contractors, tradesmen, and material suppliers usually have the right to be paid for goods they deliver or work they do. In many cases, this includes the right to file a lien, which prevents the customer from selling the property or using it as collateral for a loan unless the bill in question is paid. In some states, a lien enables a contractor to foreclose on the property and sell it to obtain payment.

However, filing a valid lien means observing a lot of legal fine print. Skip a step and you might lose your rights. For instance, you may be required to inform the customer of your lien rights in writing before beginning work in order for a later lien to be valid.

Lien rights are set by state statute and case law, which can change from year to year. If you work in more than one state, there's even more to keep track of.

To help contractors keep abreast of their rights and duties, there's the *Credit Manager's Survival Kit*. Updated annually, the book has a brief chapter on lien requirements for each state and copies of the relevant forms a contractor must file to secure lien rights.

The book also comes with the names and phone numbers of an attorney in each state. The attorneys have agreed to answer simple questions over the phone, although they will charge their regular fees for serious legal work.

The *Survival Kit* is not light reading, and it won't turn you into a lawyer overnight. If serious money is involved, you'll want to hire an attorney. But the book is a good starting place for builders who want to learn the ropes. The entire book sells for $495, but you can purchase just the chapters for the states you work in (one chapter costs $89). Contact CMSK at P.O. Box 6625, Madison, WI 53716; 608/222-3676. □

Beyond Low-VOC, *continued*

now three national brands of low-odor paint and one regional brand. Glidden's *Life-Master 2000*, Benjamin-Moore's *Pristine*, and Sherwin-Williams' *HealthSpec* are available nationwide. Kurfees Paints distributes its *Fresh Air Formula* paint only in the central states.

It works. Contractors we talked with use low-odor paints for a variety of applications, but all agreed that the product performs like a quality traditional latex. Paul Smith, of Paul Smith Painting in Knoxville, Tenn., says Glidden's Life-Master "blends well, brush to roller, it touches up great, and the odor is certainly low." Smith used the product to paint a furrier's warehouse. Smith says his customer didn't want his furs to take on a paint smell while sitting in the warehouse.

Dan Hockney, vice president of Baynum Painting in Covington, Ky., says his firm has had success with Kurfees' Fresh Air Formula in doctor's offices, office buildings, hospitals, and restaurants — "anywhere there is a captive clientele." Hockney says several repeat customers specifically ask for the low-odor paint.

The product costs Hockney more than other latex, but he says, "You substantially reduce personnel costs by not having to pay late shift or weekend rates." □

FROM WHAT WE GATHER

A new UL standard will rate the impact resistance of roof coverings. Underwriters Laboratories (UL) developed the new standard at the request of an insurance industry group concerned about heavy losses from hail damage to roofs. The new standard rates shingles and other roofing materials on a scale of one to four, depending on their ability to hold up to the impact of steel balls of various weights dropped from a specified height. To meet the standard, the front and back surfaces and intermediate layers of a roof covering must show no tearing, fracturing, cracking, or splitting.

Where does your job make you hurt? If you said, "The lower back," you've got company: In a survey by the University of Iowa's Injury Prevention Research Center, 70% of trades workers associated the lower back with work-related pain. Knees were also mentioned prominently, especially among roofers and cement masons. Activities identified most by respondents as causing pain included working in the same position for long periods, bending or twisting the back, and working in awkward or cramped positions.

Fiber-cement products should be easier to get now that James Hardie Building Products, the major producer of cement-based siding panels and underlayments, has made nationwide distribution arrangements with Georgia-Pacific Corp. and Weyerhauser Co. Hardie plans to triple production of its Hardiplank, Hardipanel, Hardisoffit, and Hardibacker products within 12 months. Unlike many manufactured siding products, the Hardie products are not vulnerable to rot or insect damage. To find a local distributor, call 800/942-7343.

The Smart Wood program is now certifying recovered lumber. International Hardwood Flooring (IHF), of Cinnaminson, N.J., is the first wood supplier to receive the certification. According to Smart Wood, the reclaimed timber from a single demolished warehouse can offset the need to harvest 1,000 acres of forest. IHF supplies reclaimed wood flooring, stair parts, and moldings as well as certified sustainably harvested wood products. For information, call 800/338-7481.

Coming: Spray-applied fiberglass insulation? A report in May's *Energy Design Update* says Monoglass, Inc., of Vancouver, B.C. is working on a system to spray fiberglass with water and an adhesive binder into wall cavities in new construction. More testing and code approval is needed before the new system is ready for market, according to *EDU*. For more information, contact Monoglass (North Tower, Suite 430, 650 W. 41st Ave., Vancouver, BC V5Z 2M9, Canada; 604/261-7712).

EIFS Update,
continued

relative quality of construction of EIFS claddings in New Hanover County is representative of other markets in the U.S." While sloppy or incorrect installation makes the problems worse, said U.S. Gypsum spokesman Marty Duffy, even a correctly built EIFS wall is somewhat vulnerable. The U.S. Gypsum press release stated, "U.S. Gypsum has concluded that barrier EIFS wall construction and maintenance is impractical and EIFS performance is unreliable."

Research confirms EIFS criticisms. U.S. Gypsum's own investigations of 30 homes using the company's EIFS system in New Hanover County, in the Wilmington, N.C., area, discovered elevated moisture levels in all the homes tested.

U.S. Gypsum also contracted with the National Research Council of Canada (NRCC) to investigate the North Carolina EIFS installations. NRCC examined several Wilmington-area buildings, then conducted laboratory testing and computer modeling of EIFS wall systems to evaluate their susceptibility to water intrusion and moisture problems. In the lab, NRCC found the same vulnerabilities to moisture noted in the field: Windows and other penetrations, said the researchers, are significant leak points. NRCC also identified wind pressure as the primary driving force for water intrusion.

OSB catches some blame. The researchers reported that oriented strand board (OSB) sheathing, and the adhesive used to attach insulation boards to the OSB, acted as a conduit that transported intruding water farther into the wall system. (The U.S. Gypsum water-management wall systems use Durock, the company's cement board, not wood-based panels, as the substrate for insulation or synthetic stucco.)

Drying ability is limited. Experiments and computer models also gave some information on the ability of walls to dry out. EIFS walls include multiple vapor barriers that can trap moisture in the wall, even if poly is not attached to the interior face of the wall studs, NRCC pointed out. OSB sheathing and interior wall paint can both act as vapor retarders. The NRCC computer simulations estimated that damp OSB sheathing would take 100 weeks to dry out in a wall with a poly vapor barrier attached inside the wall, and 35 weeks if the wall had no poly but did have two coats of paint.

Drainage systems mandated. In North Carolina, where the current EIFS uproar surfaced, a push to ban EIFS altogether has not succeeded. But the state Building Code Council has ruled that any synthetic stucco system built after 1997 must include drainage details subject to local approval. A similar provision governs EIFS installations in Vancouver, B.C. □

TAX TALK

Electronic Deposit Requirement Will Complicate Payroll Tax Payments

by Martha Myron

Many employers have recently heard from the IRS about a new requirement that payroll tax deposits be made by electronic funds transfer, not through deposit of checks with coupons.

This has been a requirement for very large depositors for a while now, but effective January 1, 1997, many more businesses will be affected. If you are now required to deposit taxes semi-weekly (that is, within half a week after your pay period ends), or if you make total tax deposits of more than $50,000 annually, you will be required to file electronically next year (over time the program will be broadened to include almost all employers). If the IRS determines that you qualify, they will send you Form 9779, "EFTPS Business Enrollment Form," to register as an electronic filer. There will be a 10% penalty for any payment made by check, even if you pay on time.

You will be required to tell the IRS what bank account you will pay taxes from. Then when each tax deposit is due, you will have to use the telephone or a modem to authorize an electronic funds transfer to an IRS-designated financial agent. All deposits, including withholding taxes, federal unemployment taxes, fuel taxes, and business income taxes (except for sole proprietors), will have to be handled this way.

The good news is that you will no longer need to deal with coupons and taking a deposit to the bank. The agent that the IRS uses to receive the transfers will issue an acknowledgment of each transfer, and the IRS hopes that there will be computer programs available to handle the process automatically using a modem.

The bad news is that this new system may complicate your accounting procedures. If you use a checkbook-based accounting system, you'll have to make sure you enter the times and amounts of the electronic transfers, even though you won't actually be writing checks. And since a third party will be receiving the transfers, you can't be sure of when actual withdrawals will be made.

Although you can authorize the transfer at any time from thirty days to one day before the payment is due, the IRS says the actual withdrawal won't take place until the deposit due date. And if the IRS-designated agent delays in making the transfers after you've authorized them, you aren't responsible for any tardiness. On the other hand, it can be confusing to not know when bank withdrawals are made. If, like some of my clients, you keep track of cash on hand by calling the bank and checking your balance, you'd better develop another system. That method isn't a great idea anyway, but it sure won't work if someone else is tapping your account.

Notifications to taxpayers were supposed to be mailed out in May. If you think you're covered by the new rule but didn't get a form, or if you would just prefer electronic filing to the old method, you can call 800/945-8400 to request an enrollment packet. The IRS could take as long as ten weeks to process your enrollment form, so if you are required to enroll, do so by October to be ready when the rules take effect on January 1. □

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