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Critics say fiberglass causes cancer. Its defenders say the evidence is weak

# Fiberglass Insulation Under Attack

According to a recent statement written by Gerard Scannell, assistant secretary of the Occupational and Safety Health Administration (OSHA), fiberglass insulation now requires labels stating that the material causes lung cancer in humans.

OSHA already requires material safety data sheets for fiberglass insulation. These sheets merely say fiberglass wool is classified as a possible cause of cancer in animals and recommend that workers avoid contact and wear respirators — a less serious warning than that specified in Scannell's statement.

Scannell's statement, written in a letter to Richard Munson, president of an association called Victims of Fiberglass, says there is "positive human evidence, based on one valid study...indicating [that fiberglass has] carcinogenic effects in humans." Under OSHA's Hazard Communication Standard, this is grounds for requiring all fiberglass insulation manufacturers to include warning labels on their products.

An OSHA spokesperson says there is not one but three studies to support the theory that fiberglass is a carcinogen in humans. These studies were conducted on thousands of workers in fiberglass manufacturing facilities in the United

States, Canada, and Europe. Representatives of the

industry, however, say these studies are far from conclusive. The studies did not take into account, for instance, whether the plant workers were cigarette smokers or whether they were regularly exposed to asbestos, formaldehyde, or other carcinogens.

Tests conducted in 1987 by the World Health Organization's International Agency for Research on Cancer (IARC) did find that glass fibers caused cancer in laboratory rats. However, the fibers were surgically implanted in the stomach linings of rats, not inhaled or ingested. The study itself concluded that "[the] findings were inadequate to reach a conclusion regarding a causal association between fiberglass and cancer in humans."

Lee Edes, executive director of the Insulation Contractors Association of America, says that as long as the proper precautions are taken when installing fiberglass insulation, there is no need for concern. "Fiberglass has been used for years — imprudently until recently — and there has never been any problem with it," he says.

Victims of Fiberglass president Munson, whose credibility has been challenged because of his financial interests in the cellulose insulation

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## NE Housing Costs Outrun Income Gains

The good news from the 1990 U.S. census is that New Englanders more than doubled their incomes during the 1980s. The region's 110% increase in personal income during the decade shot Connecticut, Massachusetts, and New Hampshire to the first, second, and fourth spots, respectively, in the national ranking of median family incomes.

The bad news is that the rise in housing costs — to more than three times the median family income, as compared to 2.3 times nationally — negated these gains in income, since they caused the rise in the total cost of living to outstrip the income gain.

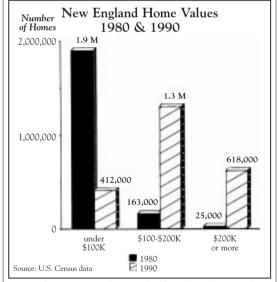
Home ownership nevertheless grew in New England

during the 1980s. The region's 1.3% increase in the proportion of people owning homes contrasted favorably with the national situation, in which homeownership fell for the first time since the 1930s. Apparently, most of this gain in New England ownership came before prices peaked: At present price and income levels, only 41% of New Englanders can afford to buy homes, compared to 43% nationally.

The census revealed a few other trends relevant to the building industry:

- The number of households classified as "families" dropped from 72.4% in 1980 to 68.9% in 1990. People living alone now make up nearly one-quarter of New England's population.
- Northern New England (Vermont, New Hampshire, and Maine) has a larger proportion of the region's

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In 1980, the vast majority of New England homes (91%) were worth less than \$100,000. In 1990, only 18% were valued at less than \$100,000. The \$100,000 to \$200,000 range now holds the most homes.

### EPA To Produce Asbestos Manual

The Environmental Protection Agency (EPA) has commissioned the National Institute of Building Sciences (NIBS) to produce an asbestos manual for asbestos handlers. The manual will provide hands-on information on how to deal with materials containing asbestos.

The manual, which should be ready early next year, is expected to reflect the EPA's recent recognition that in many cases it is best to leave asbestos in place, rather than try to remove it. Like the EPA manuals for radon prevention and mitigation, it will likely set a standard that might be referred to by code bodies or courts.

# NE Market Update: Conn. Leading Rebound?

Economic forecasts suggest that it may be Connecticut that leads New England's construction economy out of its doldrums, rather than Massachusetts, as is commonly expected.

The Connecticut Associated Builders and Contractors' forecasting index for the first quarter of 1991, which forecasts future construction activity, rebounded strongly from its December 1990 low of 59, rising to a level of 96. This level, which matches that of the rest of the nation, far outpaces the overall New England index of 63 for the same quarter.

At about the same time, the Kiplinger Washington Letter, a widely respected economic newsletter, predicted that Connecticut would be the first state to have a general recovery. It found used-home sales already improving in Fairfield County, the state's (and possibly the region's) strongest area.

All this suggests that New England's construction rebound, when it comes, may begin in Connecticut, with perhaps a boost from Vermont and upstate New York, which are less overbuilt than other parts of the region, such as Massachusetts, Rhode Island, and southern New Hampshire and Maine.

#### Barbie Caught In Crossfire

Barbie the doll was recently caught in the crossfire between loggers and environmentalists. The Oregon Lands Coalition, which advocates continued logging of Pacific Northwest ancient forests, complained loudly to Mattel, Barbie's maker, about a Barbie commercial that expressed a hope that "We could keep the trees from falling." Mattel pulled the ad.

# New Mortgage Finances Remodeling

A new mortgage program, the Community Home Improvement Loan (CHIL), allows borrowers to finance up to 95% of the cost of both buying and remodeling an existing home. The joint offering by the Federal National Mortgage Association (Fannie Mae) and GE Capital Mortage Insurance Companies is aimed at lowand moderate-income homebuyers who make no more than 115% of their area's median income. Recognizing that such borrowers often don't have lengthy credit records, the program allows them to establish that they are

credit worthy by showing a record of steady utility and rent payments.

But the most innovative part of the mortgage is its inclusion of remodeling costs in the mortgage amount. The program allows these borrowers to finance remodeling costs up to 30% of the post-remodel (rather than current) value of the homes. Thus you might borrow up to \$95,000, for example, to buy a home that costs \$65,000, but which would be worth over \$100,000 once it is remodeled. The program can also be used in the same way when refinancing an existing mortgage.

At present, the most prominent program offering similar features is the Department of Housing and Development's (HUD) 203k program. But that program requires an official HUD inspection and report before each draw against the mortgage. This slows the remodeling process, frustrating owners and contractors. With the CHIL program, a draw needs to be approved only by the lending bank.

Remodelers knowledgeable about the program can steer prospective clients to participating lenders. For a list of lenders offering the loans, contact Fannie Mae, Public Information Office, 3900 Wisconsin Ave., Washington, DC 20016.

## EPA to Publish IAQ Guide

To help builders and remodelers in residential construction cope with the increased emphasis on indoor air quality, the Environmental Protection Agency (EPA) is developing a guidebook titled, "A Homebuilder's Guide to Indoor Air Quality." The book will be an overview of the importance of proper ventilation and some of the product choices builders can make to improve air quality.

The agency is also ready-

ing another publication on the subject titled, "Design for Good Indoor Air Quality: An Introduction for Design Professionals." Intended for designers who work primarily on commercial projects, the book may also be useful for residential designers.

"The focus is on total building design, not just specific sources of contamination," says Bob Thompson, an environmental engineer with the EPA.

For example, the book will advise designers to reduce the use of laminate materials that the rate of outgassing. The book will also advise readers to ask manufacturers or suppliers as a way of evaluating alternative building materials.

Both publications should be available this winter. For more information, write: EPA Public Information Center, 401 M St. SW, (PM 211B), Washington, DC 20460.

contain formaldehyde to reduce about the amount of outgassing

## New FHA Regs Drive up Loan Costs

New lending guidelines recently enacted by the Department of Housing and Urban Development (HUD) will increase borrowing costs to homebuyers using the Federal Housing Administration (FHA) loan program. These new costs will knock about 80,000 potential homebuyers out of the market each year, says Bill Sorrentino, director of single-family home finance for the National Association of Home Builders (NAHB).

The new regulations, which went into effect July 1, limit the percentage of closing costs that can be financed to 57%. Previously, 100% of the closing costs could be financed. This means that on a \$100,000 FHA loan with typical closing costs of \$2,500, the homebuyer would have to come up with approximately \$1,000 in additional cash at closing.

"HUD is saying that this only means people will have to save up a little longer," Sorrentino says. "But that additional \$1,000 or more is a lot of money to low-income purchasers. It may take them years to accumulate that much."

Homebuyers in states with particularly high closing costs. including Maryland, Delaware, Georgia, and New Hampshire, are hit hardest by the change in regulations, he says.

In addition to increased downpayment costs, FHA homebuyers will now have to pay a new annual mortgage insurance premium each month, as well as the upfront premium of 3.8% (which can be financed as part of the mortgage note). On a \$100,000 loan, this would mean an additional monthly premium payment of \$80 — about \$36 more than the equivalent private mortgage insurance.

Authorized by the 1990 National Affordable Housing Act, the HUD changes are intended to shore up the shaky FHA insurance fund. Too many loan defaults, many on overvalued loans, have caused heavy losses to the fund. A 1990 audit predicted that unless steps were taken to keep the FHA solvent, the fund would be bankrupt by the late 1990s.

FHA loans are traditionally among the most flexible and lowest cost available. You don't have to be a first-time buyer and there are no income, age, or sales price limits. The only thing that is limited is how much you can borrow. FHA loans are also attractive because they require low up-front costs, making them attractive to borrowers who can't qualify elsewhere.

#### Housing Costs, continued

younger people, while southern New England has a higher percentage of elderly. Rhode Island has the highest percentage of elderly, with 15% of its residents 65 or older. Vermont leads the kiddie category, with over 25% of its population under 18.

### Upcoming **Events of Interest:**

Timber framing guru Tedd Benson, of This Old House and other fame, is giving a timber framing workshop October 14-19, at Benson Woodworking in Alstead, N.H. The cost is \$600. For more information, call Kathy Nerrie at 603/835-6391.

At the other end of the tech scale, you can catch up on computer systems for contractors at CMC '91, "The Computer Show for Contractors and Other Professionals," from October 28-31 in Nashville, Tenn. There will be more than 50 conferences and over 400 booths. For more information, contact Sharon Price, CMC '91, P.O. 310318, Newington, CT 06131-0318; 800/451-1196.

Insulation, continued

industry, is spearheading the fight to get fiberglass insulation labeled as a carcinogen. While Munson could not be reached for comment for this story, a "fact sheet" issued by the Thermal Insulation Manufacturers Association (TIMA) states that funding for Victims of Fiberglass comes principally from organizations and individuals associated with the cellulose industry.

California requires labels. Meanwhile, fiberglass insulation sold in California after July 1 of this year must carry a label warning consumers that the product is a "possible cancer hazard," says Brad Oelman, vice president of corporate relations for Owens-Corning Fiberglas Corp. in Toledo, Ohio. This is based on California's Proposition 65, which requires all substances that have tested positively as carcinogenic in animals or humans to carry warning labels.

Blown-in insulation ban. In a related issue, legislation banning the use and sale of blown-in fiberglass insulation was recently introduced in the California legislature by assembly member Tom Bane. The bill calls blown-in fiberglass a "potential health risk" and compares the fibers to

those of asbestos, a known carcinogen. "Of all fiberglass products, blown-in or pumped fiberglass insulation poses the greatest threat to public health because the fibers vary greatly in size and are easily circulated in the air," the bill says. The legislation would not affect fiberglass batt insulation.

A spokesperson for Bane's office says the bill is expected to come up for hearings this fall. But E.E. Fuller, vice president of administration and public affairs for TIMA, the insulation trade group, says it's unlikely the legislation will garner any serious consideration from the legislature. "It's easy to talk about fiberglass and asbestos in the same breath," says Fuller, "but there's a great deal of difference between the two."

Fiberglass not like asbestos. Fiberglass is manufactured from molten glass, while asbestos is a mineral fiber. There is a great deal of difference in the two materials' physical structure. Asbestos breaks down into tiny fibers that are not easily eliminated by the body. As a result, the material remains in the body as an irritant. Glass fibers, when inhaled, do not break down into thinner strands, making them easier for body fluids to remove.

## Tax Talk

## How To Pass It On While Keeping Control

by Irving L. Blackman

It's been over 35 years since I was first asked for help in transferring a business from the owner to the owner's children. Today the two biggest fears of business owners passing their businesses on remain the same.

The first is estate taxes, and how to avoid them. The second is control, and how to keep it. Incredibly enough, that is usually the bigger fear: Most business owners freeze with fear when it actually comes time to pass control of their businesses to their own flesh and blood. Many delay the event and go on to the big business in the sky while still holding the company's assets, thereby forcing their families to fall victim to Fear #1, high estate taxes. Why? Because they held control (over 50%) of their business' common stock right up to the day they died.

You can answer both these fears—beat the tax man and keep control of your company - if your company is a corporation. Here's how it works: The owner turns in all of

his or her stock (common) into the corporation in exchange for two types of common stock: voting common (say, 100 shares of it) and nonvoting common (the remaining 9,900 shares). This transaction is tax free. The owner then sells (rarely) or gives (the method used most often) the nonvoting stock to his kids over a period of years. This passes the value of the company to the kids, removing the estate tax bite, but not the control. The owner can end up owning as little as 1% of the company (the 100 shares of voting stock) and still retain 100% of the control. Just what you wanted — low taxes, high control. The kids already own most of the value of the company when you pass away, and are left the voting stocks at that time, thereby gaining control.

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# Aid for Bleeding Wood Siding

The paint and forest products industries have joined forces to answer some nagging questions about how to prevent the extractive "bleed" that can discolor exterior wood finishes. Questions about finishes and detailing are answered in the new report, *Prevention of Extractive Discoloration*, from the Joint Coatings/Forest Products

Bleeding is caused when wood's natural extractives — tannins, resins, oils, gums, and starch — are dissolved by water or solvents and carried to the wood's surface. It is most common in resin-rich wood sidings, such as redwood and cedar, but can occur in any species of wood. The key to preventing it, says the report, is to protect the wood from moisture and solvents.

Three kinds of bleeding. There are three types of extractive bleed:

1) Diffused discoloration is usually attributed to a porous or thin-finish coat that allows rain water, dew, or humid air to penetrate the wood. The resulting stains usually appear shortly after the first wetting. Diffused discoloration can also be caused by the water in water-based finishes. In this case, staining will occur before the finish dries

Staining can also occur when moisture in unseasoned wood carries the extractives to the surface. The committee recommends using wood with a moisture content between 10% and 15%.

2) Rundoum extractive staining occurs when water finds its way to the backside of the siding and runs out between laps and at joints, Eliminating the moisture source with good construction detailing is the first line of defense. Overhangs, flashings over openings and at wall and roof intersections, and caulking, especially where the siding butts trim, will keep out most of the exterior moisture. Interior moisture should be ventilated and a continuous air/vapor barrier installed. Backpriming is also recommended to protect the back side of the siding if wind-blown rain and capillary-driven moisture are getting behind the siding.

3) Knot bleeding is caused by oily resins that are dissolved by the solvents in oil-based and alkyd paints. To prevent it, seal knots and pitch pockets with an exterior shellac before finishing.

Protect with proper finishes. In all cases, the best protection comes from a high-quality finish system. For a painted finish, the committee recommends two coats of a top-quality exterior acrylic latex over an oil-base or alkyd "stain blocking" primer. The top coat should be applied within 30 days of priming.

For a natural wood finish, the committee recommends a clear or lightly pigmented water-repellent finish. The report cautions that some water repellents will last only a few months, and even the best clear finishes must be reapplied every year or two.

Stains provide minimal protection. Semi-transparent solvent-based stains do not form a complete water barrier. Solid color solvent-based stains can form a thin film if applied heavily, but the protection is unreliable without a good oil or alkyd primer. Latex stains are porous and need a stain-blocking primer beneath to prevent discoloration at the time of application.

The Joint Coatings/Forest Products Committee, sponsored by the USDA Forest Products Lab and the Federation of Societies of Coatings Technology, includes paint chemists and wood technologists. In addition to extractive bleeding, the committee has studied such wood finishing subjects as low-VOC finish performance, the effects of interior humidity on exterior finishes, and finish recommendations for smooth, embossed, and saw-textured siding

## Indoor Air Quality Legislation May Hit Commercial Projects

Builders and remodelers working on commercial projects may have to meet federal indoor air quality standards if legislation now moving through Congress is enacted.

If it is approved, the Indoor Air Quality Act of 1991 would mark the first time the federal government has mandated ventilation requirements to achieve a healthier indoor environment.

Interest in indoor air quality has grown recently as agencies such as the Environmental Protection Agency have released alarming reports about toxins present in tightly built or poorly ventilated buildings. In addition, a recent court case, Call v. Prudential (Eight-Penny News, 6/91) opened the way for building occupants who become sick from toxic fumes to sue any professionals who design and build a structure in which the ventilation system proves inadequate. Common contaminants include asbestos, formaldehyde, benzene, combustion by-products, and radon.

The legislation, which does not affect residential buildings, requires that hvac systems supply a minimum of 20 cubic feet per minute (cfm) of outdoor air per person to all occupied spaces and a minimum of 60 cfm per occupant to areas where smoking is permitted. Air leakage and air change requirements are also included.

Generally, the requirements are more stringent than those contained in ASHRAE Standard 62, which was adopted in 1989 and is now making its way into the model building codes. "In some cases, the House (of Representatives bill) mandates 10 to 20 times more ventilation than is necessary," says one ASHRAE spokesman. That means a lot of wasted energy, he adds.

Building industry groups, such as the Sheet Metal and Air Conditioning Contractors National Association (SMACNA), oppose a mandatory federal standard. "Federal codes scare the hell out of a lot of people in this industry," says Stan Kolbe, director of governmental affairs for SMACNA, who says this type of legislation "short-circuits" the codemaking process. However, he points out, most hvac systems in place today would meet the standard, with minor adjustments, if it is adopted.

—Carol Anderson

## From What We Gather

Recent homebuyers aren't expecting much appreciation in their home values, according to a recent NAHB survey. Only 15% of new homeowners surveyed expect annual appreciation to exceed 10%, with almost half expecting less than 5%.

Workers receiving substantial worker's compensation benefits take longer to recover than those receiving lower benefits, according to a study by the National Bureau of Economic Research in Cambridge, Mass. The study found that workers spent about 4% less time on the job for each 10% increase in benefit payments.

Many U.S. building products don't meet Canadian standards, according to the Canadian Home Builders Association. The Canadian group has asked the new Canadian International Trade Minister to either loosen Canadian standards or enforce import standards.

Ethical business people are happier and less stressed than those willing to tolerate unethical behavior, according to a recent study. London House of Park Ridge, Ill., tested high-level executives and found that the most emotionally healthy were also the most ethical. They drew no conclusions on whether their ethics produced their emotional balance or viceversa.

Trusses held up more new single-family roofs than did rafters and joists in 1988, according to a lumber industry report. Trusses held up the roofs in 668,700 homes (62%), while rafters took the load on 409,500, or 38%.

Junk plywood is the end fate of much of the tropical hardwood imported by Japan, according to a recent New Yorker story. The plywood, which is near finish quality, is nevertheless used not for fine furniture or woodwork, but for such things as concrete forms and other temporary utilitarian uses. The article describes one instance in which the flawless plywood was used to protect the fake wood-grain plastic walls of an elevator.

**Shed human skin** accounts for 70% of all household dust.

# New Family Patterns Changing Kitchen Design

A new survey of kitchen designers conducted by the National Kitchen and Bath Association has found that changes in family life are having a profound impact on kitchen design. In particular, kitchen designers are talking about revamping the kitchen "work triangle" to accommodate the different way kitchens are used today.

"Maybe we should have a work quadrangle or pentagon," says Ellen Cheever, educational director of NKBA. "Or maybe we should have two work triangles."

Changing the triangle. Changing the time-honored work triangle, which has been the foundation of kitchen design since the late 1940s, may be long overdue. Back then, the kitchen was the private domain of the "housewife." The woman of the family did most of the meal prep, shopping, and cleanup, and she needed unimpeded access to the three major work areas-the sink, the range, and the refrigerator. Home economists studied how many dishes, groceries, pots and pans, and appliances the typical kitchen contained, and used

this information to establish kitchen design guidelines.

"In today's families," Cheever says, "food preparation is a group activity." In 50% of families, more than one person cooks, cleans up, or visits with the cook. Most of the time the helper is the spouse. Even guests get into the act. The survey found that guests help with last minute meal preparation 75% of the time people entertain.

When more than one person works in the kitchen, a single work triangle in a U-shaped kitchen is claustrophobic. Broken U's, L-shaped kitchens with islands, and kitchens with unusual angles are better, says Cheever.

Newer kitchens also treat standard installations differently. For example, a quarter of new kitchens include two sinks, so one person can wash vegetables while another gets a head start on dishes. Another change is that the position of the microwave is now critical because it is used so much. Placing it low enough so children can heat up a quick meal or snack is important.

**Big meals still in.** In spite of the notion that families today

are on the go and do all their cooking in microwaves, the NKBA survey found that many families use their kitchens to prepare large dinner parties. But the cooking they do often includes fresh ingredients. Light, stir-fried meals, salads, and seafood are in. Such cooking requires big side-by-side refrigerators to keep ingredients fresh, and to hold meals made ahead of time for entertaining. What you won't see are cupboards of canned food.

The survey found that families still spend a lot of time in the kitchen. But they need specialized storage and space for new activities. Many families want a mail center or even a computer work counter included near the food preparation area. They also want more daylight and more versatile and pleasing artificial lighting.

The results of the survey and changing trends in kitchen design will play a large role in a major revision in the NKBA's Kitchen Industry Technical Manuals, says Cheever. These manuals provide design guidelines for functional, attractive kitchens. By looking at how families use kitchens today, the industry hopes to update the standard design guidelines to match today's reality.

— Marylee MacDonald