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Eco Vinyl?

Claims and counter-claims about a product that remains the market share leader in siding.

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To critics and competitors, vinyl siding is a deadly foe of the environment. Burn it, and carcinogens are released into the air. Bury it, and it lingers for millennia. Vinyl siding is the only cladding product ever to have a muck-raking documentary film, the 2002 *Blue Vinyl*, made about it. So who could or would argue that vinyl siding, the market-share leader in cladding both for new construction and replacement, is a green, or sustainable, building material?

Actually, the claim for vinyl's eco-friendly, or at least eco-neutral, nature is being heard increasingly often. "Many people think that vinyl is an environmental enemy," writes nationally syndicated newspaper columnist Tim Carter. "Not so. It is actually a very environmentally friendly building material." Of course, many disagree with that, among them the Sierra Club, the nation's largest environmental activist organization.

"First off," says the group's Green Home website, about vinyl siding, "it is energy intensive to manufacture, and in the process creates dioxin, a potent carcinogen. It also can produce dioxin at the end of its life, when it is incinerated or burns in a house fire."

Some environmental groups, such as the Healthy Building Network (HBN), disparage the use of PVC in any building materials, including windows, arguing that its manufacture results in the buildup of chlorine and other toxins in the land, air, and in the water table. The HBN promotes use of PVC competitors such as fiber-cement siding as a healthy alternative.

Vinyl Makes Its Case

The Vinyl Siding Institute (VSI), in Washington, D.C., has responded to detractors with an aggressive campaign designed to convince contractors, homeowners, or anyone else with an interest that, weighed in the balance, vinyl siding is as environmentally safe, or safer, than most competing products. The argument rests:

- Compared with its competitors, vinyl produces less waste in its manufacture and installation, costs less to transport because it is far lighter than brick or fiber cement, and is made from domestically produced raw materials (i.e., salt and natural gas).
- Because of its durability (25 years, depending on the product, building, site, and climate, according to the Minnesota Green Affordable Housing Guide and the fact that it requires no additional finishing products (caulk, paint, glue), vinyl siding may meet the sustainability requirements set by organizations such as the U.S. Green Building Council and, when used in a building project, can help to qualify the project for green certification.
- Foam-backed vinyl — vinyl siding with a foam backer installed separately or as part of the product — improves the thermal performance of the building envelope by as much as 5% to 8% across all climate

zones. To back up that claim, VSI cites a study conducted this past winter by Newport Ventures, a Schenectady, N.Y., organization offering third-party verification testing services. The testing, on a house in upstate New York, compared applications of foam-backed vinyl siding and fiber-cement siding. Newport Ventures engineer Mike Moore says that the results — based on thermal imaging and REM/Rate home energy ratings — show that specifying foam-backed vinyl over fiber cement would save approximately $56 in natural gas and utility costs annually.

- Vinyl is a more environmentally friend product than several competitors. Newport Ventures recently subjected vinyl siding to a BEES 4.0 assessment. BEES (Building for Environmental and Economic Stability) is a Windows-based software that measures the environmental performance of building products based on the life cycle of the product. The BEES test analyzes a product across 12 environmental categories developed by the Environmental Protection Agency.

Newport Ventures, according to Moore, found that vinyl is an environmentally superior product to stucco and brick — though not cedar siding — when a combination of criteria such as toxicity, global warming, human health, and ozone depletion are measured from raw material to manufacture through installation and removal. Fiber-cement siding was not included in the testing.

Certification-Driven

Tad Radzinski, of Sustainable Solutions Corp., in Royersford, Pa., says that green building certification programs such as the National Association of Home Builders' National Green Building Standard and the U.S. Green Building Council's LEED (Leadership in Energy and Environmental Design) programs have accelerated efforts to establish claims for the eco-friendly nature of vinyl siding. Both programs certify a building project as green based on select environmental criteria. "People make choices based on what they hear," Radzinski says, "not on life cycle analysis and science. Based on its durability and low maintenance, most green building programs will qualify vinyl siding for points."

VSI executive director Jery Huntley acknowledges the many attacks on the product. "What matters," she says, "is having numbers that come out in a BEES analysis and whether vinyl siding earns points in the leading green building certification programs. Anyone can say that their product is green, but are they really green, based on sound science?"

Skeptics Weigh In

Among the issues now being raised is the matter of whether or not vinyl siding is a recyclable product. Radzinski concedes that "very little" of the vinyl siding now on the market contains recycled material. "But I do see that coming," he says, citing products by CertainTeed. "A lot of manufacturers are stepping up and working on programs to get this material recycled."

Of course, the vinyl siding industry is hardly alone in seeking the mantle of environmental friendliness. This spring a House committee on commerce, trade, and consumer protection was told that there are now almost 300 competing environmental certification programs, verifying, on some level, that the products certified do not poison the water or air, create unnecessary waste, or unduly add to the effects of climate change. —*Jim Cory, editor, REPLACEMENT CONTRACTOR.*