The Truth About
Vinyl Siding and Fiber Cement Siding

Side-by-Side

Side with the facts

Vinyl siding is the number one choice of remodelers, builders and homeowners. Used alone or in combination with other exterior cladding, vinyl and other polymeric siding deliver undeniable curb appeal at the most affordable price. An impressive list of benefits includes lasting beauty, durability, extremely low maintenance, sustainability and great value.

Some competitors continue to make claims that simply are not true. However, the Vinyl Siding Institute, Inc. (VSI) is dedicated to presenting the facts. On the pages that follow, we present the facts about vinyl siding and important things to consider about fiber cement.

Important facts about vinyl and other polymeric siding

- Vinyl siding is the number one choice of exterior cladding across the United States and Canada, with demand nearly five times greater than fiber cement siding.[1]
- Vinyl siding has the lowest total installed cost[2] (including materials and labor) and the lowest long-term maintenance needs of any exterior cladding.
- Vinyl siding is the only exterior cladding with both third-party product certification and certified installer programs, both of which are administered by an accredited, independent, quality control agency.
- The *VSI Product Certification Program* verifies that manufacturers' products – both vinyl and polypropylene siding – meet or exceed globally recognized ASTM standards in many critical areas, including windload, impact resistance and appearance.
- The *VSI Product Certification Program* also includes certification based on the industry standards for color retention.
- There are currently nearly 950 products and almost 350 vinyl siding colors in VSI's *Official List of Certified Products.*
- The *VSI Certified Installer Program* trains and tests experienced vinyl siding installers on their knowledge of proper vinyl siding installation techniques based on the industry standard, ASTM D4756.
- Vinyl siding contributes to achieving points for certification in the U.S. Green Building Council (USGBC) LEED® for New Construction and LEED for Homes Rating Systems as well as the ICC 700 National Green Building Standard™.

Why America sides with vinyl

Durability

Vinyl Siding	Fiber Cement Siding
■ Engineered to provide optimum stiffness and reliable stability, while remaining lightweight	■ Susceptible to unsightly chips and cracks during shipping, delivery and installation, which must be repaired before it can perform properly
■ Through the *VSI Product Certification Program*, independent testing verifies that manufacturers' products meet or exceed globally recognized ASTM standards in critical areas, including windload, impact resistance and appearance	■ No independent third-party certification to verify product quality
■ Used in many climate zones; withstands summer heat in excess of 100°F and sub-zero winter cold, season after season	■ Susceptible to freeze/thaw complications
■ The *VSI Product Certification Program* requires that certified products withstand heavy winds of at least 110 mph required for most installations under the International Residential Code[3]	■ As an absorptive cladding, fiber cement can hold moisture, creating the potential for penetration leading to rot, mold and/or poor indoor air quality
■ The International Residential Code and International Building Code define vinyl siding as a vented cladding, recognizing its rainscreening performance[3,4]	
■ Some vinyl siding complies with 150 mph building code requirements in Texas and hurricane-prone Miami; several manufacturers offer products that withstand 190 mph winds	

Photo credit: ©Steve Hall, Hedrich Blessing

Beauty

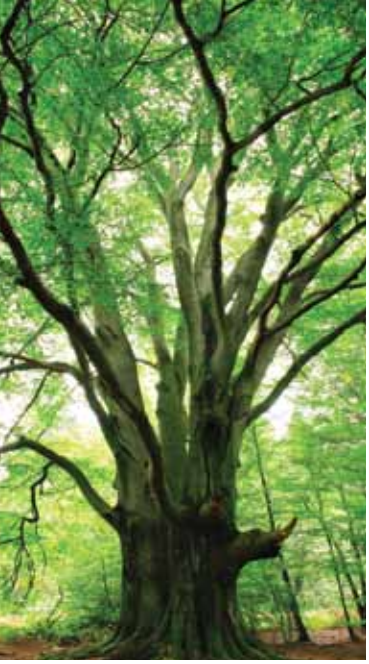
Vinyl Siding	Fiber Cement Siding
■ An impressive variety of profiles and shapes, with ideal choices to suit virtually any architectural style ■ An ever-increasing spectrum of colors, including darker options and period colors for historic restoration ■ Comprehensive architectural trim options and accessories in matching and complementary colors ■ The *VSI Product Certification Program* includes certification based on the performance standards for color retention	■ Prefinished options are available at a higher cost and in a limited range of colors ■ Requires touch-up during installation ■ Must be painted and repainted at regular intervals

Maintenance

Vinyl Siding	Fiber Cement Siding
■ Never requires painting and almost 350 vinyl siding colors have been certified for color retention ■ Only requires simple periodic cleaning with mild soap and a garden hose ■ Does not require caulking	■ Must be repainted to maintain appearance and moisture resistance ■ Caulking, especially where panel meets trim, must be maintained to help prevent damage due to moisture

Installation

Vinyl Siding	Fiber Cement Siding
■ Starts performing from the moment it's installed without labor-intensive priming, caulking or painting ■ An independent agency ensures that certified vinyl siding installers are trained and tested on ASTM-accepted application techniques ■ Does not use any materials that can cause adverse health effects to installers or others ■ No special tools required to install for safety assurance ■ Lowest total installed cost of any exterior cladding[2]	■ If not prefinished (at added cost), fiber cement must be primed, painted and in some areas, caulked ■ No independent third-party certification to verify installers are properly trained ■ Silica-based fiber cement, like James Hardie® siding products, requires special tools for installation, along with a dust mask or respirator, and may potentially cause adverse health effects, such as silicosis (an incurable lung disease), for installers who do not use respirators[5] ■ The National Association of Home Builders has published a series of safety cards detailing the health hazards of silica in home building[6] ■ Heavy weight requires special equipment for handling; must be drop-shipped on site and requires larger crews



Environmental Impact

Vinyl Siding	Fiber Cement Siding
■ Life cycle analysis tools, such as Building for Environmental and Economic Sustainability (BEES), demonstrate high level of environmental performance for vinyl siding ■ Can earn points in leading green building programs because it requires no additional finish resources, is a durable product with rainscreening characteristics and may contain recycled content ■ Vinyl siding is lighter per square than fiber cement, requiring less fuel and energy to ship ■ Most of its raw materials are typically shipped by rail or pipeline, minimizing shipping costs ■ Scrap can be fed back into the manufacturing process, creating less waste	■ Contributes to earning relatively few points in the ICC 700 National Green Building Standard™ ■ Requires more energy and water to manufacture than vinyl siding ■ Raw materials are typically shipped by truck, increasing shipping costs ■ Many fiber cement manufacturers send production scrap to landfills

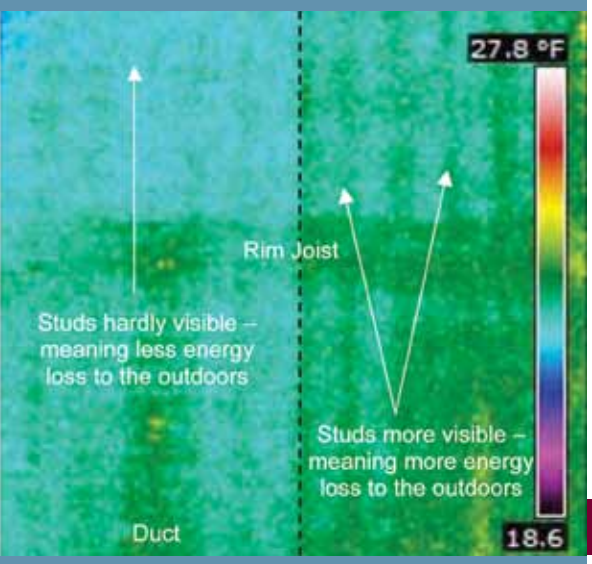
Value

Vinyl Siding	Fiber Cement Siding
■ Lower total installed cost[2] (includes material and labor) and more efficient at the jobsite ■ Never requires painting ■ No long-term maintenance costs	■ The initial purchase price (including labor and finish costs) is more than 51 percent higher than vinyl siding[2] ■ Requires priming and one or two coats of paint; preprimed and prefinished boards can carry an upcharge of up to 15 percent ■ Requires repainting to maintain appearance

Warranty

Vinyl Siding	Fiber Cement Siding
■ Lifetime warranties are available ■ Typical warranties are transferable and cover both manufacturing defects and color/appearance	■ Warranties range from 30 to 50 years depending on product and cover manufacturing defects ■ 15-year limited finish warranty on prefinished product ■ Most warranties prorated after first year

Energy performance



Thermal imaging shows how a home's studs allow heat to pass through a wall.

The New York State Energy Research and Development Authority's (NYSERDA) High Performance Residential Challenge included studies on the performance of insulated vinyl siding. One of the homes studied was a two-story colonial in Burnt Hills, New York. The home had a section clad using both insulated siding and James Hardie® fiber cement siding.

Insulated siding was found to minimize heat loss through the wall assembly, especially through the studs, which have the lowest R-value in the overall assembly. It was projected that the Burnt Hills home could save significant resources by specifying insulated siding rather than fiber cement siding, including annual savings of $56 in natural gas and energy costs, 448 pounds of CO_2 and 3.2 million Btu[7].

Siding with quality

Before you let someone else tell you what today's vinyl and other polymeric siding are all about, we recommend discovering for yourself. Visit www.vinylsiding.org to learn more about the nearly 950 certified products and almost 350 certified vinyl siding colors listed in VSI's *Official List of Certified Products.* All verified by an accredited, independent, quality control agency to meet or exceed the industry standards for quality.

Through links to manufacturer websites, you will see the vast selection of colors and styles now available, even warranties that can last the lifetime of a home and transfer to the next owner.

The more you learn, the more you'll appreciate why America sides with vinyl.

America Sides with Vinyl℠

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[1]Freedonia – Siding to 2019, 2009 Residential Siding Demand by Material. [2]R.S. Means 2011 Residential Cost Data. [3]International Code Council, 2012 International Residential Code, Chapter 6. [4]International Code Council, 2012 International Building Code, Chapter 14. Data Sheet, www.jameshardie.com/pdf/msdsexterior-medium-density.pdf. [5]James Hardie® Material Safety [6]NAHB Safety Card, *Silica Hazards in Home Building* (set of 4). July, 2008, www.nahb.org/fileUpload_details.aspx?contentID=98426. [7]Building Green with Insulated Vinyl Siding, Newport Ventures, July 2, 2009.

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