

# Concrete Homes Technology Brief

## No. 15: *Fiber Cement Siding*

### What is fiber cement siding?

*You want a home with a traditional appearance but you don't want to worry about rot or the caulking and painting required every few years with wood siding. Fiber cement siding offers the appearance of traditional wood-based siding materials with much lower maintenance requirements, while maintaining its shape and color much better than vinyl siding. By 2015, nearly 20% of all new homes are clad with fiber cement siding.*

Fiber cement siding is produced from a mixture of cement, sand, and cellulosic fibers. Manufacturing of fiber cement siding utilizes autoclaving, a high temperature steam curing process, to increase strength and dimensional stability. The cellulosic fibers are added to the mixture to prevent cracking. Fiber cement siding is manufactured in layers forming a sheet of the desired thickness. A wood grain is often imprinted onto the surface at the time the uncured product is lifted by an accumulator roll and cut into individual sections, or in a separate high pressure molding process immediately after the product is cut.

Several design options, and a full palette of colors, are available with fiber cement siding. One option is horizontal lap siding, which includes profiles such as: Dutch, beaded, and traditional. Incorporating architectural elements adds personality to your home. Shaped fiber cement siding is available as shingles, half rounds, octagons, and random squares (with either a straight or staggered edge). Vertical siding options include a traditional stucco appearance, smooth, or cedar, (either without vertical grooves or with regular interval grooves). Fiber cement soffits are also available in smooth and cedar textures, both of which can be vented. Matching low maintenance composite trim materials can complete the architectural design.

### What are the advantages of fiber cement siding?



Fiber cement siding provides a traditional wood grain appearance without the drawbacks associated with wood. It's available in a variety of textures, profiles, and colors matching your design requirements. Fiber cement manufacturers offer complete systems for siding, decorative shapes, soffit, and trim applications. This remarkable product is manufactured under rigorous factory specifications and guidelines, providing consistent quality and excellent dimensional stability. It doesn't warp, buckle, or fade—traits associated with vinyl siding products—and holds a Class 1 (A) Fire Rating. Fiber cement siding will not rot, is capable of withstanding damaging effects of salt spray and ultraviolet rays, and cannot be penetrated by birds or insects. Once installed, the product stands up to bumps and direct impacts, unlike aluminum siding, and doesn't become brittle in freezing conditions or melt in the presence of heat sources, like barbecue grills, as does vinyl siding. Siding tinted with integral pigments is permanently colored, and also takes paint well, with some products warranted to hold paint for up to twenty five years. Transferable product warranties can last as long as fifty years depending on the degree of “pre-finish” applied in the factory.

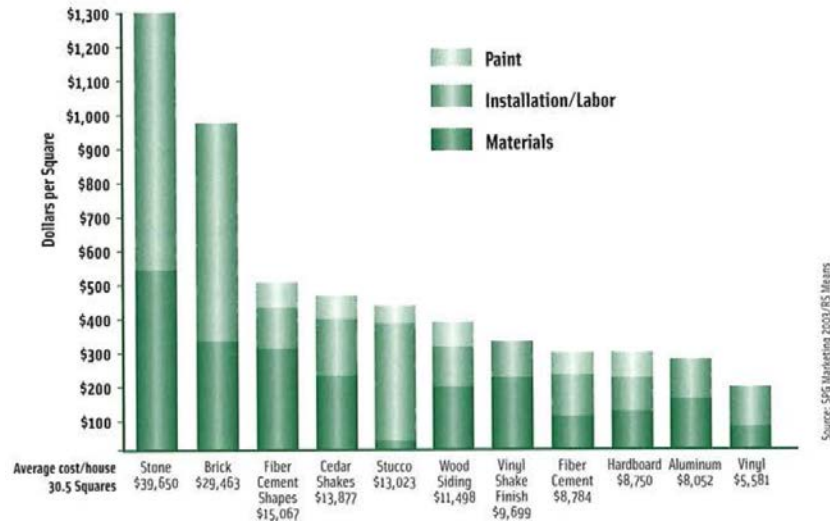
### What options do I have in selecting fiber cement siding?

Most people buy fiber cement siding that has been factory primed and sealed or is fully pre-finished in the factory. Factory priming protects the product from moisture penetration on the job site and once the product is installed. Some contractors choose to buy the product raw and then prime and finish paint it themselves, although this is not recommended by manufacturers and may affect the warranty.

### How much does fiber cement cost?

There are three factors affecting the overall cost of the siding product: materials, labor, and paint or stain being applied. Of particular interest is comparing the total in-place, system price (including paint or stain) to other cladding systems. Using 2003 data, fiber cement costs about 75% less than natural stone, 37% less than cedar, 24% less than

wood siding, and slightly more than hardboard siding to install and finish on a new home, according to R.S. Means data (see chart).



**How difficult is fiber cement siding to maintain?**

While fiber cement siding is a low maintenance product, it does require some care to maintain its appearance. Insect nests and accumulated dirt can easily be removed by power washing. It's also a good idea to inspect caulked joints each year between butt ends of boards, windows, and doors. Gaps that open when caulk pulls away can easily be filled with a high quality acrylic, latex, or urethane caulk meeting ASTM Standard C-920, which are readily available in hardware and paint stores. A well maintained fiber cement siding product generally requires repainting only every seven to fifteen years.

**What should I look for to be sure I'm getting a quality siding job?**

The first step is locating a builder or siding contractor with experience installing fiber cement siding. Ask for references and look at jobs your contractor has completed to verify you will get a quality installation. Are the joints neat and evenly caulked? Fiber cement product installations are typically not suited for do-it-yourself projects. Special tools and expertise are required to install the product. After selecting a contractor, discuss whether you want to choose from the palette of colors offered by the manufacturer or prefer to buy a pre-primed product that will be finish painted or stained to the color of your choice following installation.

**What's the bottom line?**

Fiber cement siding costs 24% less on an installed basis than wood siding and is significantly less expensive than natural stone siding. It is more durable than wood, vinyl, and aluminum, while matching the appearance of traditional wood without costly maintenance and repair hassles.

**To learn more about fiber cement siding, installation practices, and warranties visit:**

Portland Cement Association, [www.cement.org](http://www.cement.org)  
 Cemboard, [www.cemplank.com](http://www.cemplank.com)  
 CertainTeed Corporation, [www.certainteed.com](http://www.certainteed.com)  
 GAF Materials, [www.gaf.com](http://www.gaf.com)  
 James Hardie, [www.jameshardie.com](http://www.jameshardie.com)  
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