

# Siding



## General

No material is “fire proof.” However, the proper use and assembly of fire-rated building materials can reduce a fire’s spread and lengthen the amount of time it takes for a home to ignite and burn. Structural assembly is the process of layering materials when building exterior walls and roof.

Your home’s exterior walls and siding are most susceptible to radiant heat and open flame. Typically, the corners of your home are the weakest part of the structure. This is due to high surface to volume ratios. It is recommended that Class A or B *rated* siding materials be used.

## Wood panels and boards

Wood panels and boards are readily combustible, and conducive to fire spread. A fire can burn through these materials to the underlying structure in less than 10 minutes. A gypsum underlayment can increase burn time to a one-hour rating.



## “Real” Stucco

This noncombustible, one-hour rated material is a cement and gypsum mixture. It is applied in two or three coats and reinforced with metal mesh.

## Synthetic stucco, exterior insulating finish system (EIFS)

Synthetic stucco is an acrylic cement finish on fiberglass mesh. This material is noncombustible and has no rating by itself.

This product is interesting because it significantly delays fire due to the insulation quality of the rigid foam and the fact that the system does not ignite; it actually fails and falls away. In moderate to high fire hazard situations this product works well.

## Heavy timber or log construction

The low surface-to-volume ratio of heavy timber takes longer to burn; this makes it a practical choice in medium to high fire risk areas. The minimum thickness for log construction is six inches for the frame and exterior siding, and three inches for steps and decking.



## Concrete synthetic stone

This noncombustible synthetic stone is reinforced with fiberglass and metal mesh, and has a one-hour rating.



## **Brick, stone and block**

These permanent, noncombustible materials usually have a two-hour rating, and are the best to use in regard to fire.



Material **Class** is categorized by composition, or resistance to fire (combustible or noncombustible). Class A has the highest resistance; class C has the least resistance.

**Ratings** are based on the assembly and layering of building materials and the burn time before ignition. Ratings are divided into classes:  
A (the best – 2 to 4 hrs)  
B (1hr)  
C (20 min)

### Material Classification

#### Class A/B

- Brick
- Stone
- Block
- Concrete synthetic stone
- Metal
- Stucco
- Synthetic stucco
- Fiber cement panels, boards, shingles
- Heavy timber log (minimum of six-inch diameter)

#### Class C

- Wood panels and boards

**However**, Class A materials generally need an underlayment of additional materials to give it a class A *rating*. This is because Class A materials conduct heat beyond the exterior.

The combined use of fire-rated building materials, design, and assembly gives your home a better chance of surviving a wildfire.

### **References**

For additional information on protecting your homesite, see Colorado State University Cooperative Extension Fact Sheets:

- 6.302, *Creating Wildfire-Defensible Zones*
- 6.303, *Fire-Resistant Landscaping*
- 6.304, *Forest Home Fire Safety*
- 6.305, *FireWise Plant Materials*
- 6.306, *Grass seed Mixes to Reduce Wildfire Hazards*

For more information or assistance contact your local fire department or the Colorado State Forest Service.