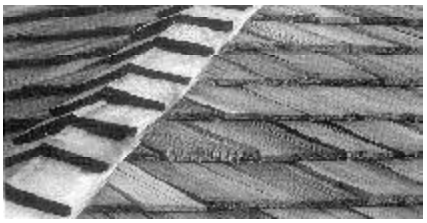
Roofing Materials

General
No material is "fire proof;" however, proper use and assembly of fire-rated building materials can reduce a fire's spread and extend 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 roof is vulnerable to wildfire because it is the largest surface area of your home. The exposed, uneven surface of a roof can easily trap hot, wind-blown embers. Simple roof forms are easier to protect than complex ones due to less surface area and intersections, which may create heat traps. Use class A or B roofing materials to reduce risk.

Wood shakes and shingles
The thin physical make-up and surface structure of wood shakes and shingles are readily combustible and conducive to fire spread.



Asphalt shingles
Asphalt shingles are the most economical in terms of cost and life expectancy. Mineral reinforced asphalt shingles have a Class C rating and are gradually being replaced by fiberglass reinforced asphalt shingles, which are Class A or B materials.

Metal: sheets and shingles
Metal roofing is sturdy, lightweight, and non-combustible. However, it requires a gypsum underlayment for a class A assembly rating.

Metal roofing comes in the form of galvanized steel with paint; aluminum with paint; stainless steel; and, copper. It is also manufactured in the form of imitation wood shingles.

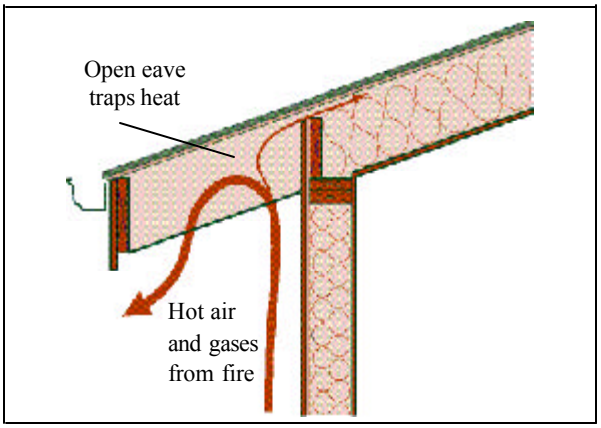
Fiber-cement shingles
These synthetic cement shingles are manufactured with either a fiberglass or wood mixture and are less brittle then solid cement shingles. They are a non-combustible material, but require an underlayment for a Class A assembly rating.

Membrane roofs
These hard or semi-solid materials (i.e. hot tar and rubber) are applied to flat roofs and are slightly combustible. However, they are often used in conjunction with other materials, such as cement, and can be applied over a gypsum underlayment for a Class A assembly rating.

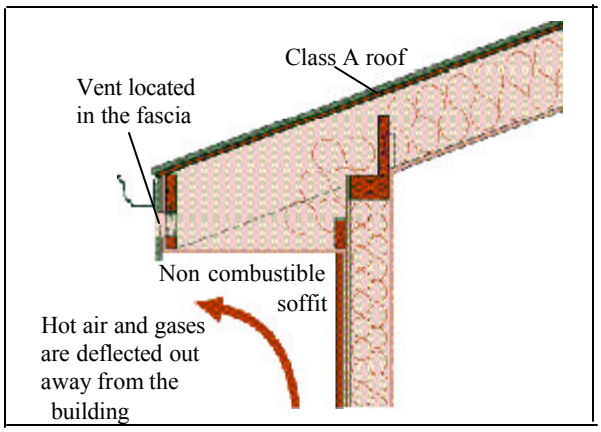
Tile, clay tile, concrete and slate shingles
These thick noncombustible materials can be manufactured to look like wood shingles. They have a Class A rating and provide the best protection against fire.

Eaves and soffits

Enclose open eaves with a flat soffit to deflect burning embers and gasses.



Open eave with no soffit



Fully enclosed soffit with isolated vent

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

Ratings are based on 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 (1 hr)
C (20 min)

Material Classification

Class A

Brick	Concrete
Tile	Slate
Clay	Asphalt
Metal	Fiber-cement

Class B

Pressure-treated shakes and shingles

Class C

Wood shakes and shingles
Plywood
Particleboard

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.

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