

# Replacing Your Wood Shake Roof:

## A Re-Roofing Guide for Homeowners

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### INTRODUCTION

Wood shake roofs are no longer politically correct. Many cities and homeowners associations have prohibited them in recent years, because they are not fire safe. Disastrous wild fires in California have burned thousands of homes in recent years. Even where wood shake roofs are still permitted, many homeowners are looking for a safer choice. As wood shake roofs approach 20 years of age, the time for replacement looms.

### FIRE SAFE RE-ROOFING CHOICES

The choices for a fire safe roof fall into the following categories:

- Asphalt or Fiberglass Shingles
- Metal Roofs
- Lightweight Concrete Tiles
- Regular-Weight Concrete and Clay Tiles

### ADVANTAGES AND DISADVANTAGES OF EACH ROOFING CHOICE

#### *Asphalt or Fiberglass Shingles.*

They are light in weight, although they usually weigh more than a wood shake roof. According to one report, asphalt shingles weigh from 2.5 to 3.6 pounds per square foot. They generally last from 10 to 30 years. The shingles generally cheapen the look of a house, even though the more expensive ones have a thicker, shake-like appearance. Installing these shingles in a more expensive neighborhood may well lower the resale value of the home. According to one roofing company, asphalt shingles can resist winds of 53 to 64 mph. Asphalt shingles will cause the temperature in your attic space to increase by as much as 20 degrees over a wood shake roof.

#### *Metal Roofs*

Steel roofs weigh 1.5 pounds per square foot. Metal roofs look more attractive than asphalt roofs, and probably equal or better than the appearance of a new wood shake roof. Metal roofs are fireproof. Steel will not burn. Several manufacturers of steel roofs claim that their roofs can withstand winds of up to 120 mph.

#### *Concrete and Clay Tiles*

Concrete and clay tiles generally vary from 5 to 8 pounds per square foot for the lightweight variety, and from 9 to 12 pounds for the regular variety. To install these tiles on a former wood shake roof may require an engineering report, and the roof and walls may need to be reinforced. These tiles may become brittle and break with age. In addition, the tiles may

discolor and the surface may deteriorate. These tiles are installed over plywood with roofing felt. Most homeowners are unaware that the tiles may all have to be removed periodically so that new roofing felt can be installed! (The manufacturers warranty covers the tiles only, and not replacement of the roofing felt.) The importance of roofing felt is often exaggerated by roofers who state that the roofing felt is what drains the water off the roof, and that the tiles are just for decoration! Concrete tiles are not waterproof, and when wet will absorb approximately 15% of their weight in water.

### THE IMPORTANCE OF ROOF WEIGHT

In researching this article, the author was repeatedly told by people knowledgeable in building and construction not to increase roof weight on a home. Standard building procedure on new homes for a number of years has been to “load the roof” before stucco and drywall are installed. What this means is that concrete and clay tiles are loaded in stacks on the roof. If this procedure is not done, the stucco can be expected to crack extensively, and drywall will crack and even pull away from the nails. When substantial additional weight is added to the roof of a 20-year-old home, the same result can be expected. Although a 3,000 square foot roof with either wood shakes or steel panels weighs in at approximately 6,000 pounds (which includes roofing felt and trim pieces), a light-weight concrete roof will weigh approximately 28,500 pounds. The addition of 22,500 pounds of weight to the roof is the equivalent of parking six mid-size cars on your roof *at all times!* If a regular weight concrete roof is installed, this will add another 18,000 pounds of roof weight (or 40,500 pounds of extra weight) over a wood shake roof. In addition, it is the “wet weight” that should be considered. Some people may be surprised to learn that concrete tiles and concrete shakes may absorb up to 15% of their weight in water.

Simple logic tells a person that adding extra weight to the roof of an older home should be avoided.

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