



TILE ROOFING INDUSTRY ALLIANCE

# Roof Maintenance Guide

[tileroofing.org](http://tileroofing.org)



Congratulations! You have purchased one of the most beautiful, durable and energy-efficient roofs available. Nothing performs like tile – with proper maintenance, your tile roof is likely to last for the life of your structure. Clay and concrete roof tiles are noncombustible and have a Class A fire rating, the highest attainable. Tile also provides optimal protection against hail, wind, freeze/thaw cycles and seismic events. And natural air ventilation under tile creates a heat transfer barrier that can help cool a house in summer and warm it in winter, lowering energy costs.

TRI Alliance member manufacturers' foremost goal is to provide the world's most sustainable and superior roof system.

We are committed to educating our customers about proper maintenance of their tile roof to provide a lifetime of worry-free protection. This guide was created to answer frequently asked questions and provide maintenance guidelines.

Please read this important information and keep this guide with your roof tile warranty for future reference.



### CHOOSING A ROOFING CONTRACTOR TO MAINTAIN YOUR TILE ROOF

Even considering its unsurpassed durability, a tile roof requires regular maintenance to perform optimally. Replacing broken tiles, removing algae, mildew and moss, and repairing damaged flashing details are all vital steps in maintaining its aesthetic and protective qualities for years to come.

Choosing a professional roofing contractor for repairs and maintenance ensures your safety and the longevity of your roof. Regardless of whether you just want your roof inspected (which should be done 2 years after initial installation and every couple of years thereafter) or have specific repair needs, you should take precautionary steps in selecting a roofing contractor.

If your roof is still under warranty from the original installation, contact that contractor for all inspections or repairs so that your original contractor's warranty is not voided. Ensure that your contractor secures permits before any work begins, or you will be responsible for any code violations.

If your roof is no longer under installation warranty, take the following steps to find a contractor:

- Check with your neighbors for contractors they have had success with.
- Use the FIND A CONTRACTOR search feature on TRI Alliance's website.
- Get at least two bids in writing.
- Select a contractor that has specific and verifiable experience with tile roofing.
- Check the licensing and insurance coverage of the contractor you are considering.

### WALKING ON YOUR TILE ROOF

If you need to walk on your tile roof, use caution to ensure your personal safety and prevent damage to roof tiles that may void your warranty. Certain methods of walking on the roof can minimize damage:

- Step on the bottom three inches of the installed tile. This section is supported by the lapped tile beneath it, and weight is transferred through to the deck below.
- Orient your feet in a horizontal direction. Try to distribute your weight evenly, and walk as softly as possible.
- On high profile "S" tiles, distribute your weight on the high points of adjacent tiles.
- Avoid walking on hips or valleys to prevent damage to specially cut tiles that are more difficult to replace.

Keep in mind that activities such as cleaning gutters and hanging holiday lights can be accomplished from a ladder rather than walking on your roof. Ladder braces may be attached to avoid damage to your gutters and tile.

TRI Alliance strongly recommends that only trained, insured professionals walk on your tile roof and that proper fall protection is used.



## Maintenance

### MILDEW, ALGAE AND MOSS

If you choose to clean your tile roof, TRI Alliance urges you not to do the work yourself or hire a cleaning company but strongly recommends that you hire a licensed professional roofing contractor so that you avoid the dangers associated with walking on a wet tile roof. A licensed professional roofing contractor will notice and report potential maintenance issues that a cleaning company would overlook.



Many climates are conducive to mildew, algae and moss growth on everything from glass, stucco, siding and driveways to roofing products including concrete and clay roofing tiles. While this growth can result in a dull surface appearance, it can be treated to restore the original look. Mildew, algae and moss do not grow directly on tile but on the accumulation of dust and other organic materials that settle on tile. With enough cycles of heat, moisture and light, spores start to grow.



Many environmental variables affect the potential for this organic growth, including location of the structure, the direction the roof is oriented to the sun and the quantity of trees, canals and lakes in the area. While research continues, currently there is no known manufacturing procedure or coating applied on the job site that would have a long-term preventative effect on this condition. Fortunately, mildew, algae and moss can be removed or treated. If the growth returns, treatment can be repeated as necessary.

Gutters and other areas associated with the roof should also be thoroughly cleaned.



### DEBRIS ACCUMULATION

To ensure the proper flow of water, excessive debris such as leaves and pine needles should be removed from gutters and valleys.



### FLASHINGS, STACKS AND VENTS

Topical flashing details such as vents, plumbing stacks, skylights, solar panels and headwall details are critical to the long-term performance of your tile roof system and should be checked for damage during inspection.



If the integrity of the flashing detail is compromised, replacing the flashing detail is recommended.



In most cases, compromised metal flashings may be refastened in place.



## Broken Tiles

### REPLACING BROKEN TILES

Broken tiles may cause problems by allowing water and UV rays to penetrate through to the underlayment and damage it. Have broken roof tiles replaced as soon as possible. TRI Alliance strongly recommends that you contact a professional roofing contractor to repair or replace broken tiles.



Roof tiles damaged by foot traffic or other types of damage should be replaced.

Small corner chips less than approximately 3" may be repaired by gluing the broken area in place.

To replace broken tile:

- To replace an individual broken tile, break the tile into smaller pieces with a hammer or similar tool. This will minimize disturbance to surrounding tiles.
- Once the broken tile is removed, clear any remaining fasteners. The underlayment surrounding the broken tile should be sealed, cleaned and patched with roofer's mastic at the old nail/screw hole(s).
- For roof slopes over 7:12 that were installed using battens, wedge surrounding tiles upward, apply roof tile adhesive and slide the new tile into place (Fig. 1).
- For roof slopes 7:12 and below that were installed without battens, nail an approximately 12 x 6" piece of 1/2" plywood to the deck in position to act as a batten. Next, insert a new tile or apply mastic to overlapping areas of the new tile and put into place (Fig. 2).
- Position tiles fastened with adhesive to an adjacent tile. Do not apply adhesive to the interlocking water channel; apply above the headlap to avoid water damming (Fig. 3).
- Ensure surrounding tiles are replaced and properly fit and seated.

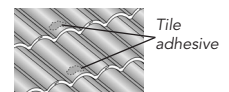


Fig. 1: For applications with battens



Fig. 2: For applications without battens



Fig. 3: For applications without battens



## Surface and Appearance

### RECOATING AND PAINTING CONCRETE TILE\*

Unlike most other roofs, a concrete tile roof can be recoated if desired. TRI Alliance recommends that you hire an experienced professional to perform any work on your concrete tile roof.

#### Clear coating

A clear coat of 100% acrylic sealer may be applied to renew the roof's original luster. An experienced professional will properly clean your concrete tile roof prior to applying a clear coating. Different preparation and coating methods may be used depending on the factory coloring process.

#### Painting

An experienced professional will properly clean your concrete tile roof prior to applying paint. The roof should be primed with a clear alkyd primer following the manufacturer's recommendations for application and curing. If changing the color of your concrete tile roof, TRI Alliance recommends the use of a high-quality 100% acrylic paint.

### EFFLORESCENCE

Efflorescence is a temporary surface condition that is common in many concrete building products. Efflorescence is caused by the chemical nature of cement. It is superficial and in no way affects the quality or functional properties of the tile. Manufactured cement contains free lime, and when water is added, a series of chemical reactions takes place. These reactions are accompanied by the release of calcium hydroxide that can form a white, chalky, crystalline salt deposit on the tile surface when reacting with carbon dioxide. This reaction can appear as an overall chalky white bloom (softening of color) or in concentrated patches.

How long the effects of efflorescence will last depends on the type and amount of deposit as well as local weather conditions. In most cases, the action of carbon dioxide and rainwater will gradually remove the deposit, leaving the original color of the roof intact without further efflorescence.

### WEATHERING EFFECTS

The combination of elements that destroy most other roof coverings will not seriously affect the protective properties of a tile roof. However, over time the surface of any product will show signs of aging, including roof tiles. Tiles are normally colored by either adding pigment into the body of the tile during the mixing stage (integral colored) or by applying a concentrated slurry coat of pigment to the tile surface following extrusion and forming. Slurry-coated tiles are usually selected when high-contrast, bright colors are desired, while integral-colored tiles provide a more subtle appearance. Slurry-coated tile can oxidize and turn chalky before gradually wearing down to the concrete base. Integral-colored tile may show some surface lightening, but will retain its base color indefinitely.

After this initial change, future erosion occurs at a much slower pace and will never affect the physical properties of the tile. Periodic cleaning and resealing can rejuvenate and prolong the surface finish of either cement or clay tile. Also, if the color coat of a slurry-finish tile wears down over time, you have the option of recoating your roof with a 100% acrylic paint.

In general, clay tile doesn't fade in the sun. Clay resists fading because of integral color naturally mixed in with the clay, with no layer of paint or finish on top to be worn away. This helps the tiles resist bleaching from sunshine and color loss from corrosion. Color softening will occur, but the results are subtle. Some clay tile manufacturers guarantee their tiles against fading for up to 50 years.

Color can be added to clay tile by slurry coating before firing, though this type of roof tile can't withstand freeze/thaw cycles and is appropriate for warm climates only.





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