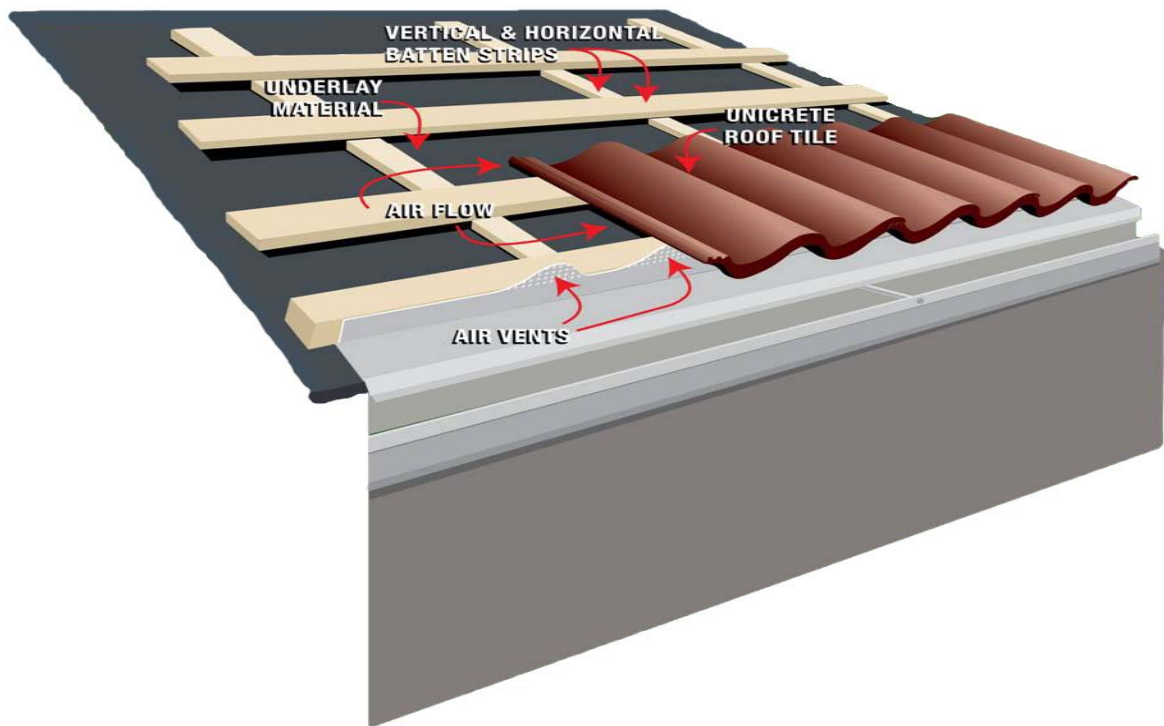


Weather Blocking on Unicrete Concrete Tile Roofs in the Ridge and Hip Cavities

Until about 2006 in the Alberta region, the most popular method of weather blocking the spaces between the top of the field tile and the bottom of the hip and ridge caps has been to use colour matched mortar. This practice has been in widespread use since around the mid-eighties. An improvement in 2003 was to add strips of wire mesh to the 2x2's under the cap. This gives the mortar something stable to bond with, and reduces the common problem of pieces of mortar coming loose and falling off the roof on steep slopes. Before the mid-eighties, the usual method was to use either a black foam closure or brown coloured Swedish putty under the cap. The mortar became popular because of the improved aesthetic look it gives, as well as the resistance it brings to entry by birds, squirrels and other pests.

The main problem that can be encountered with the use of mortar is that over time, pieces of it may fall out – especially on the steeper slopes from 8/12 and up, or when not enough mortar has been packed into the under cap area. One other disadvantage is that it does not permit good rain screen ventilation at the top of the roof, as it seals off any air movement. For this reason many roofers in the Alberta area are now using a vented metal starter flashing at both the bottom of the roof and under the hip and ridge caps (see Enervent diagram).



Unicrete Enervent System

This is a very sensible alternative to mortar as it greatly improves the top ventilation of the roof. One popular product for under the cap is called Flex Vent – a vented aluminum roll material with a peel and stick butyl fastening strip on each underside - it comes in either 11” wide (for slate profile) or 13” wide (for Estate profile) x 25’ rolls. It has a free air flow vent specification of 10sq. in. per ft. and so for every 15’ of vented ridge area it will satisfy 1 sq. ft. of ventilation requirements. It is often used to replace the more traditional roof vents that give 35” to 40” of free ventilation space and therefore require 3 or 4 vents for each sq. ft. of ventilation area. It has the added advantage of improving the vented rain screen area between the top of the sheathing and membrane and the bottom of the tile and thus helps promote attic area cooling. This also works well for hips where it combines with the bottom vented starter flashing or starter air channel built into the slate tiles, to make the rain screen air flow more efficient.

When using a vented or solid ridge tape or solid metal ridge venting system, extra care must be taken to ensure the cap is installed properly. The 2x2 hip or ridge-board build up, or ridge bracket system must be very well secured at all trusses. If using the 2x2 build up method all joints should be staggered. The caps must be securely nailed or screwed in place by hand with a minimum 3½” hot dipped galvanized nail or corrosion resistant screw. In addition each cap must be caulked in place by having a 10mm bead of caulking run at the back top of the cap - from the bottom of one side up through the centre of the cap and across the nail hole and back down to the bottom of the opposite side. The next cap is then embedded in place with the underneath front of the cap embedded into this bead of caulking that has been run on the back of the cap underneath. Silicone caulking should not be used on concrete roof tiles (or any concrete product) as the silicone seal will not last due to dampness wicking under the silicone through the surface of the concrete. Usually a thermo-plast, butyl, or urethane based caulking is the best choice.

As a general observation, the cap portion of the roof is generally the least vulnerable to water intrusion. It has no roof area above it, and therefore does not receive any rain or melting snow water flowing into it from above, and only receives the moisture which may directly hit it during a severe rain-storm. Obviously the cap itself keeps out the vast majority of this moisture. In addition, the usual method of preparing the roof would be to wrap the polypropylene or peel and stick under-tile membrane over the ridge both ways achieving a double protection cover under the 2x2’ supporting the ridge cap. It is therefore quite unlikely that cap tile installed without mortar would present a leakage problem. However, if nothing was used to fill in the space, it is quite likely that birds and squirrels could set up nests and become a nuisance. There is a requirement in the code books in both the United States and in Canada, that any hole bigger than 15mm (apx.5/8”) be filled to keep out vermin. It is also a requirement that some type of weather-blocking material be installed under ridge caps.

For additional information on Unicrete Concrete Roof Tiles please contact the Unicrete office.