

Sample Nailing Patterns for Unicrete Concrete Roof Tile

Nailing patterns will vary depending upon your geographic location and slope of the roof; here are examples for Calgary, Alberta. In Calgary for typical residential and small multistory buildings, the CSA-A220 Series-06 fastening standard is found on page 52 in Table 4 “Fastening Required for Standard Weight Tiles-Standard Conditions”.

To summarize this table:

- Between slopes of 4/12 and 12/12, the first two rows - at the eaves; in from all gables; and on either side of all hips and ridges - shall be nailed OR clipped.
- Between the slopes of 4/12 and 7/12 every THIRD row of the field tile shall then be nailed OR clipped.
- Between the slopes of 7/12 and 12/12 every SECOND row of the field tile shall then be nailed OR clipped.
- Above 12/12 EVERY tile shall be nailed OR clipped.
- All lightweight tiles shall be nailed OR clipped

For lightweight roof tiles, Unicrete recommends that the majority of the tiles be nailed under normal conditions, as it is unrealistic in the field to obtain 100% nailing success.

The only time Table 6 found on page 52 of the CSA-A220 Series-06, “Fastening Required for Standard Weight Tiles-High Wind Areas” would be used is when the conditions stated in clause 11.2.2.4 “High Wind Areas” on page 51 apply. The definition for “High Wind” here is given as **0.8 kPa** or over.

See table C-2 in appendix C and section 4.1.7.1 in the 2006 Alberta Building Code for the relevant calculations. If your location is in a high wind area the following nailing patterns apply:

High wind treatment would be to nail AND clip the first THREE rows at eaves, gables, ridges and hips, and to nail AND clip field tile in the same pattern as for normal conditions. Lightweight tiles are to be nailed AND clipped.

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