

Fastening Requirements for Polypropylene Membranes and Ice & Water shield (peel and stick) membranes under Unicrete Roof Tile.

The following outlines the proper CSA-A220 Series-06 (2006) installation method for installing underlay systems under concrete roof tile. The CSA-A220 Series-06 for “Installation of Concrete Roof Tiles” states on page 32:

Section 6. Underlayment System

6.1 General

6.1.1

“The underlayment, abutment, and eave and valley protection shall

c) Minimize the number of fasteners exposed to water by positioning the fasteners such that they are covered by successive layers of underlayment or battens

Note: *Underlayment materials should be nominally fastened to maintain the required position before battens are installed.*

6.1.2

All damaged areas of the underlayment system shall be repaired before installation of the tiles.”

This means there should be **NO** exposed fasteners in the underlayment. All fasteners should be:

- Lapped with the next layer of underlay (keep the majority of the fasteners in the top 4” area)
- Carefully positioned so that they are installed down the truss line and then covered immediately (before it rains) with the counter-batten strip. OSB is the preferred material for counter-strapping as it does not crack and split like lathe does. These cracks can then form dams and reservoirs for the water to sit in during an extended period of rain, and eventually saturate the sheathing and wick down the fastener that cracked the lathe causing a leak.
- One additional fastener may be installed between the counter-battens at the bottom of the membrane (through both membrane layers) if it is tabbed with caulking.

The worst situation occurs when staples are poorly (not flush) installed at the bottom of the underlay material. This causes the underlay to dimple, which then retains water around the staple, and wicks water down the staple leg. Roofing nails are preferable to staples for attaching underlay material. Staples are more prone to damage the underlayment, especially when being installed with a hammer-tacker type tool. In addition staples, due to the thinness of the metal are more subject to corrosion and may rust away over time - especially if exposed to a roof leak. The membrane will then be more prone to leaking through the hole created by the rusted away staple.

Please be aware of the manufacturer’s allowable exposure time frame. This is the length of time that the membrane can be exposed to the elements before being covered by the tile with out voiding the manufacturer’s warranty.

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