

Unicrete Roof Tile Quick Guide For Tile Installation*

(For Canadian CSA/A220 Series 06 Installations in Non-coastal Regions – solid deck sheathing)**

Roof Deck Sheathing	<ul style="list-style-type: none"> - min. 9.5mm thick (3/8") on 2 ft. center trusses; - 7.5 mm thick (5/16") on 16" center trusses - min. 2mm spacing between panels, edges supported, H-clips installed, grain perpendicular to truss line 	
Underlayment	<p>Roof Slope 2 1/2 /12 to 4 /12</p> <ul style="list-style-type: none"> - minimum Bakor RF 200 Blue skin self seal membrane over entire roof; or full approved low slope roofing system installed under the tile 	<p>Roof Slope 4 in 12 and up</p> <ul style="list-style-type: none"> - approved ice and water protection in valleys min. 1 ft. into eave heated section (usually peel & stick)* - main roof underlay: min. #30 felt as per CSA 123.3 or upgrades such as approved: polypropylene, base sheet, peel and stick, etc. - extend underlayment 20mm (3/4") past eaves, 100mm (4") head lap, 150mm (6") side laps, 200mm (8") up abutment walls (on new construction), lap all ridges and hips min. 150mm(6"). - mark location of all trusses on every membrane layer for counter-strapping.
Fastener Type and Placement	<ul style="list-style-type: none"> - corrosion resistant fasteners for all strapping, tiles, and fittings; no exposed fasteners; - roofing nails or cap nails preferred for underlay; 3.5" treated deck screws preferred for fittings and screw snug - 1-1/2" HDG roofing nails or treated deck screws for regular or lightweight Estate (leave fastener up 1/8"). - 1-3/4" HDG roofing nails or treated deck screws for Slate and Split shake profile (leave fastener up 1/8"). - nailing patterns for both profiles: one fastener per tile for two rows around perimeter on all slopes; - 2.5/12 to 7/12 every third row fastened: 7/12 to 12/12 every 2nd row fastened: 12/12 & up every row fastened ^ 	
Counter-Battens	<ul style="list-style-type: none"> - counter-battens minimum: 10x38mm (3/8"x1.5") SPF or OSB; but may be thicker for increased air flow - shall be installed in such a manner that the under-tile drainage plane drains freely to the eaves trough. - shall be installed directly in line with the truss/rafter and under tile battens at hips, valleys, and abutments. - may be installed underneath or on top of the roof membrane, and need not be treated wood. - fasteners shall be corrosion resistant, but counter-battens may be nominally fastened until main strapping installed 	
Tile Battens	<ul style="list-style-type: none"> - tile battens shall be minimum of 19x88mm (3/4"x3.5" - 1x4's) SPF #4 or better - battens shall be fastened with 2 corrosion resistant 62mm (2.5") fasteners that go in 25mm (1") at each truss/rafter. - tile battens shall be staggered so that not more than 1 row in 4 is joined on the same truss/rafter line - battens shall be a minimum of 2.4 m (8ft.) long and shall be butt joined only at a counter-strap/truss location. - eave, gable, hip and ridge build up 2"x2" shall use 87mm (3.5") corrosion resistant fasteners that go 1" into truss/rafter; - hip and ridge 2"x2" build ups shall have joints spliced so not to line up above each other. 	
Field Tile	<ul style="list-style-type: none"> - 75mm (3") minimum head lap is required, so 345mm (13.5") maximum tile exposure (tile are 420mm – 16.5" long). - generally flat tile will be laid in either a staggered course or a random spacing pattern - estate (S-profile) tile are usually laid in a direct bond - soldier course (rain seals all lined up) - valley cuts shall be a minimum of 50mm (2") from valley center line on each side and cut straight. - all cut tile on abutment sites shall have the bottom rain seal left in place - all tile pieces that are cut shall be re-drilled and fastened or adhered with urethane based tile adhesive 	
Tile Fittings	<ul style="list-style-type: none"> - ridge and hip cap tile shall be supported on 2"x2" build-up - not on field tile - hip/ridge apex on cottage and gazebo type roofs shall be properly water-proofed under the apex with a malleable saddle and then fitting tiles properly cut in and caulked/mortared in place. (ensure cap tiles are even at apex) - topside of the back of each cap is to be caulked the front underside of the next cap (use tile compatible caulking) - if mortaring; a wire roll shall be attached under the cap and mortar pushed fully up to the ridge board - rake tile shall not ride up on field tile rows, but butt under each row evenly; rake tiles shall be properly secured into the side of the 2"x2" gable batten with 2 fasteners; rakes may be caulked to each other and to the roof field tile 	
Flashings	<ul style="list-style-type: none"> - flashings shall be a minimum of 30 ga. galvanized Z275 (G90) metal – pre-painted preferred - all flashings (except starter flashings) shall be over-lapped a minimum of 150mm (6") when joining two flashings - valley flashing is minimum 450mm (18") deep trough type with a 20mm (3/4") step and a 300mm (12") trough - valley flashing shall extend over eaves by minimum of 20mm (3/4") and have a saddle at valley top intersection - all flashings shall be counter-flashed by either the cladding material or a second caulked counter-flashing - any valley or channel flashing that drains onto field tile rather than into the eave trough shall have a properly supported transition flashing installed, with enough transition space to ensure good positive drainage 	

* This is not meant to be a comprehensive guide. For full technical guidance, use: CAN/CSA A220 Series 06. For more complete tile installation instructions see the Unicrete Installation Notes, Installation video and Technical Bulletins

** Direct to deck tile applications are not permitted anywhere in Canada and spaced sheathing is not permitted for most of Canada.

* High snow load areas (5 kPa or more) require additional treatment, snow management systems, etc.; see CAN/CSA A-220 Series 06

^ High Wind areas (.8 kPa or greater; 1/50 chart Appendix C of NBC) special treatment required as per CAN/CSA A220 Series 06.