

DESCRIPTION

Terra-Lock is a two component, low rise, solvent-free, polyurethane foamable HFO adhesive that contains no high Global Warming Potential (GWP) propellants. The adhesive dispenses rapidly providing labor savings and fast set-time.

TERRA SEAL® UNDERLAYMENT ATTACHMENT

Since the roof components are being adhered to the top surface of the Terra Seal underlayment system, consideration must be made for the attachment of the underlayment to the substrate. Refer to the Terra Seal underlayment application guidelines for installation instructions.

ADDITIONAL ATTACHMENT REQUIREMENTS

(In accordance with Tile Roofing Industry Alliance)

Additional fastening may be necessary on steep pitches to hold the tiles in place until the adhesive has a chance to cure. The fastening requirements are as follows: **For flat/low, medium, and high profile tiles**, for slopes above 6":12" up to and including 7":12", fasten every tile in the first course and every third tile of the fifth course in addition to the tile adhesive. **Note: Some code bodies may require the eave tiles to be fastened at lower slopes.** For slopes above 7":12" fasten every tile in addition to the tile adhesive. Apply compatible flashing cement to seal all fastener penetrations where required. Note: When utilizing tiles manufactured with batten lugs, the tiles may be engaged over battens, additional fastening of tile is not required.

As an alternate to nailing every tile, for tiles designed with batten lugs only, tiles may be engaged over 4 ft. long, minimum, nominal 1" x 2" pressure treated, decay resistant battens or galvanized metal batten. Battens shall be fastened to the sheathing with 3 - 8d ring shank (0.120" diameter) nails or screws per each 4 ft. long batten. When utilizing battens, tile head lap shall be a minimum of 3" unless restricted by product design and preformed flashings with metal edge returns shall be used.

For two-piece barrel tiles only, for slopes above 6":12" up to and including 7":12" fasten every pan tile in the first course and every fifth course thereafter in addition to the tile adhesive. **Note:** Some code bodies may require the eave tiles to be fastened at lower slopes. For slopes above 7":12", fasten every tile (cover and pan tile) shall receive one fastener in addition to the tile adhesive. For attachment of cover tiles, on pitches above 7":12", the use of wood stringers under the cover tiles are optional. As an alternative, the use of galvanized, stainless steel, or copper wire and/ or compatible fastener or a straw nail (gutter spike) is also an acceptable option. Apply compatible flashing cement to seal all fastener penetrations where required. Fasteners shall be corrosion-resistant, (ASTM A641, class 1 or approved equal), of sufficient length to penetrate the deck a minimum of 3/4" or through the thickness of the deck, whichever is less.

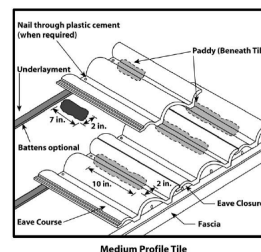
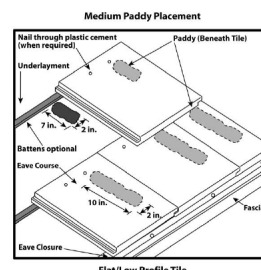
LIMITATIONS

1. Test paddy must be shot at least every other course of tile to verify that the adhesive is properly mixed and dispensed at the appropriate rate.
2. Terra-Lock dispensing systems are pre-pressurized in the factory; however, temperature and or extended improper usage of adhesive dispenser will affect the ratio calibration of the dispensed adhesive.
3. Adhesive shall be placed in accordance with our "paddy placement details" as indicated within this document.
4. Substrate and tile must be dry, clean, free from any dust, debris, or oil or any foreign matter that will inhibit the bond of the adhesive.
5. Adhere tile directly in freshly applied adhesive. Tile must be set prior to adhesive "skinning over" usually 1-2 minutes depending on the ambient temperature.
6. Terra-Lock Adhesive shall not be exposed permanently to ultra-violet rays (sunlight). Any exposed foam may be cut away and covered with mortar or coated with a Garland-approved acrylic coating.

MEDIUM PADDY PLACEMENT

Flat/Low Profile Tile

1. Starting at the eave course, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the strengthening rib of the tile closest to the overlock of the tile being set. Insure approximately 17–23 in² (109.7–148.4 cm²) adhesive contact with the underside of the tile.
2. At the second course, apply a minimum 2" x 7" x 1" (50.8 mm x 177.8 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the strengthening rib closest to the overlock of the tile being set.



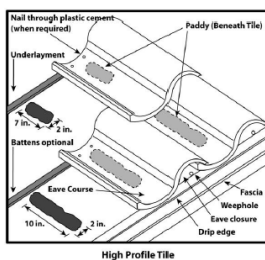
- Continue in same manner. Insure approximately 10–12 in² (64.5–77.4 cm²) adhesive contact with the underside of the tile.

Medium Profile/Double Pan Tile

- Starting at the eave course, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the pan portion of the tile closest to the overlock of the tile being set. Insure approximately 17–23 in² (109.7–148.4 cm²) adhesive contact with the underside of the tile.
- At the second course, apply a minimum 2" x 7" x 1" (50.8 mm x 177.8 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the pan portion of the tile closest to the overlock of the tile being set.
- Continue in the same manner. Insure approximately 12–14 in² (77.4–90.3 cm²) adhesive contact with the underside of the tile.

High Profile Tile

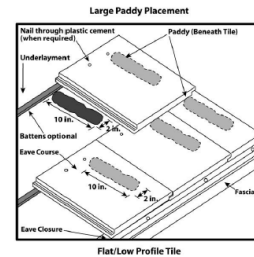
- Starting at the eave course, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the pan portion of the tile closest to the overlock of the tile being set. Insure approximately 17–23 in² (109.7–148.4 cm²) adhesive contact with the underside of the tile.
- At the second course, apply a minimum 2" x 7" x 1" (50.8 mm x 177.8 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the pan portion of the tile closest to the overlock of the tile being set.
- Continue in the same manner. Insure approximately 17–19 in² (109.7–122.6 cm²) adhesive contact with the underside of the tile.



LARGE

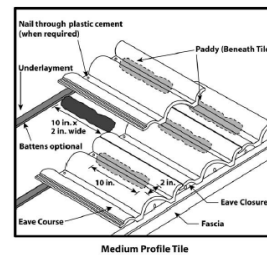
Flat/Low Profile Tile

- Starting at the eave course, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the strengthening rib closest to the overlock of the tile being set.



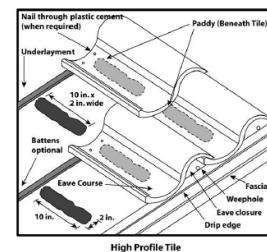
Medium Profile/Double Pan Tile

- Starting at the eave course, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the pan portion of the tile closest to the overlock of the tile being set.
- Continue in same manner. Insure approximately 17–23 in² (109.7–148.4 cm²) adhesive contact with the underside of the tile.



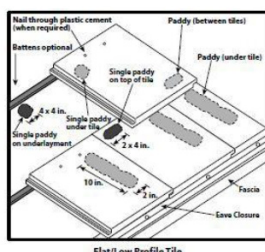
High Profile/Single Pan Tile

- Starting at the eave course, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under the pan portion of the tile closest to the overlock of the tile being set.
- Continue in same manner. Insure approximately 17–23 in² (109.7–148.4 cm²) adhesive contact with the underside of the tile.

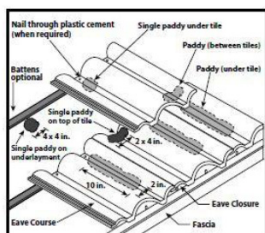


- On the eave course only, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown, under the strengthening rib for flat tile or under the pan portion of the tile for low or high profile tile closest to the overlock of the tile being set. Leave approximately 4" (101.6 mm) up from the eave edge free of foam to prevent the expanded adhesive from blocking the weep holes. Insure approximately 17–23 in² (109.7–148.4 cm²) of adhesive contact with the underside of the tile.

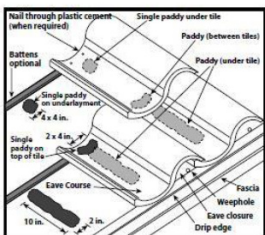
4. Apply a 4" x 4" x 1" (101.6 mm x 101.6 mm x 25.4 mm) foam paddy onto the underlayment just below the second course line positioned foam paddy under the strengthening rib for flat tile, or under the pan portion of the tile, closest to the underlock for the second course tile to be installed. Insure approximately 8–9 in² (51.6–58.1 cm²) of adhesive contact with the underside of the tile.
5. Also apply a 2" x 4" x 3/4" (50.8 mm x 101.6 mm x 19 mm) paddy on top of the eave course tile surface as shown, on top of the strengthening rib for flat tile or on top of the pan portion of the tile, closest to the underlock of the first course of tile. Install second course of tile. It is easier to work in horizontally however it is not mandatory. Insure approximately 9–11 in² (58.1–71 cm²) adhesive contact with the underside of the tile at the overlap and 7–9 in² (45.2–58.1 cm²) adhesive contact with the underside of the tile at the head of the tile. Continue in same manner.
3. Turn covers upside down exposing the underside of the tile. Apply a minimum 1" x 10" (25.4 mm x 254 mm) bead of adhesive directly on the inner edge of each side of the cover tile. Leave approximately 3/4" – 1" (19 mm – 25.4 mm) from the outside edge of the tile inward free of foam to allow for expansion.
4. Turn cover tile over after foam is applied and place onto pan tile course. Insure a minimum of 20–25 in² (129–161.3 cm²) contact area on each side of the cover tile to the pan tile. Continue in same manner. Trim away any cured exposed foam adhesive. Pointing of longitudinal edges of the cover tiles are considered optional.
5. When additional nailing is required, 2" x 4" (50.8 mm x 101.6 mm) nails or the tie wire system using galvanized stainless steel or copper wire and compatible nails may be used.



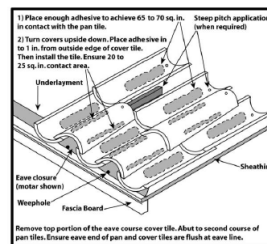
Flat/Low Profile Tile



Medium Profile Tile



High Profile Tile



Two Piece Barrel - High Profile Tile

Two Piece Barrel (Cap and Pan) Tile

1. Starting at the eave course, apply a minimum 2" x 10" x 1" (50.8 mm x 254 mm x 25.4 mm) foam paddy onto the underlayment positioned as shown under two adjacent pan tiles. Support eave tiles from rocking until adhesive has a chance to cure.
2. Continue in same manner bringing two pan courses up toward the ridge. Insure approximately 65–70 in² (419.4–451.6 cm²) adhesive contact with the underside of the pan tile.

TERRA-LOCK ADHESIVE ESTIMATED YIELD CHART PART A AND PART B KIT

Foam Placement	Tiles Per Set (net weight 85.7 lbs)	Estimated Squares (90 tiles/square)
Medium Paddy - Flat - 30 Grams Medium Paddy - Double Roll - 30 Grams Medium Paddy - High - 30 Grams	1295	14.4
Large Paddy - Flat - 45 Grams	863	9.6
Large Paddy - Double Roll - 54 Grams	719	8.0
Large Paddy - High - 65 Grams	598	6.6
Two Paddy Placement - 24 Grams	1619	18.0
Two Piece Barrel - 34 Grams per pan and 34 per cap (17 each side)	1143	12.7

ADHESIVE PLACEMENT FOR TILE PROFILE

Tile Profile	Minimum Paddy Contact Area	Minimum Paddy Gram Weight
Flat Low High	17-23 in ²	45-65
Flat	10-12 in ²	30
Low	12-14 in ²	30
High	17-19 in ²	30
Flat Low High	Two Paddies: 8-9 in ² at head of tile 9-11 in ² at overlap	12 grams per paddy
Two Piece Barrel (Cap Tile)	2 beads (1 each longitudinal edge) 20-25 in ² each bead	17 grams per paddy
Two Piece Barrel (Pan Tile)	65-70 in ²	34 grams under pan

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