



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

**MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION**

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www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

Monier, S.R.L.
Via Valle Pusteria 21
39030 Chienes (BZ) Italy

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (in Miami-Dade County) and/or the AHJ (in areas other than Miami-Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Braas/Modena "S" Tile - Clay Roof Tile

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA revises NOA 19-0226.01 consists of pages 1 through 7.

The submitted documentation was reviewed by **Freddy Semino**



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ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub Category: Roofing Tiles
Material: Clay

1. SCOPE

This approves a roofing system using **Braas/Modena “S” Tie - Clay Roof Tiles** manufactured by **Monier, S.R.L. in Ceprano, Italy** and distributed by **Crown Roof Tile**, as described in Section 2 of this Notice of Acceptance. For locations where the pressure requirements, as determined by applicable Building Code does not exceed the design pressure values obtained by calculations in compliance with RAS 127 using the values listed in section 4 herein. The attachment calculations shall be done as a moment based system.

2. PRODUCT DESCRIPTION

| <u>Manufactured by</u> <u>Applicant</u> | <u>Dimensions</u> | <u>Test</u> <u>Specifications</u> | <u>Product</u> <u>Description</u> |
|--|--|--------------------------------------|---|
| Braas/Modena S’ Tile - Clay Roof Tile | L = 17.7” W = 11.4” 0.47” thick nominal 2.8” high | ASTM C 1167 Type – I Grade - 2 | High Profile, interlocking, clay tile. For direct deck or battened nail-on, mortar or adhesive set applications. |
| Trim Pieces | Length: varies Width: varies varying thickness | ASTM C 1167 | Accessory trim, clay roof pieces for use at hips, rakes, ridges and valley terminations manufactured for each tile profile. |

2.1 PRODUCTS MANUFACTURED BY OTHERS

| <u>Product Name</u> | <u>Product Description</u> | <u>Manufacturer</u> <u>(With Current NOA)</u> |
|------------------------------------|--|--|
| ICP Adhesives Polyset AH-160 | Two component polyurethane foam adhesive. | ICP Adhesives and Sealants, Inc. |
| TILE BOND™ Roof Tile Adhesive | Single component polyurethane foam roof tile adhesive. | The Dow Chemical Company |
| “Tile Tite” Roof Tile Mortar | Premixed, pre-bagged roof tile mortar. | Bermuda Roof Co. Inc. |
| Bonsal Roof Tile Mortar | Premixed, pre-bagged roof tile mortar. | Bonsal American |
| “Quikrete” Roof Tile Mortar, FL-15 | Premixed, pre-bagged gray roof tile mortar. | The Quikrete Companies, Inc. |



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2.2 MANUFACTURING LOCATION

1. Ceprano, Italy

2.3 SUBMITTED EVIDENCE:

| <u>Test Agency</u> | <u>Test Identifier</u> | <u>Test Name/Report</u> | <u>Date</u> |
|---|------------------------|--|---------------|
| Redland Technologies | 7161-03 Appendix III | PA 102 & PA 102(A) | Dec. 1991 |
| | Letter | PA 108 (Nail-On) | Aug. 1994 |
| | P09647-01 | PA 108 (Mortar Set) | July 1994 |
| | P0402 | Withdrawal Resistance Testing of screw vs. smooth shank nails | Sept. 1993 |
| The Center for Applied Engineering, Inc. | 94-083 | PA 101 (Adhesive Set) | April 1994 |
| | 94-084 | PA 101 (Mortar Set) | May 1994 |
| | 25-7094-(3, 6 & 9) | PA 102 | Oct. 1994 |
| | 25-7120-(1 & 2) | PA 102 | Nov. 1994 |
| | 25-7183-(3 & 4) | PA 102 | Feb. 1995 |
| | 25-7214-(3, 4, & 7) | PA 102 | March, 1995 |
| | 25-7804-4 | PA 102 | Sep. 1996 |
| Celotex Corporation Testing Services | 520111-3 | PA 101 | Dec. 1998 |
| | 520191-2-1 | PA 101 | March 1999 |
| Walker Engineering, Inc. | Calculations | 25-7094 | February 1996 |
| | Calculations | 25-7496 | April 1996 |
| | Calculations | 25-7584 | December 1996 |
| | Calculations | 25-7804b-8 | December 1996 |
| | Calculations | 25-7804-4 & 5 | December 1996 |
| | Calculations | 25-7848-6 | December 1996 |
| | Calculations | 25-7183 | March 1995 |
| Current Physical Properties | TAS 112/ASTM C 1167 | RT0815.01-18 | 10/13/18 |
| Calculations | Restoring Moment | RT0822.01-18 | 10/13/18 |
| | Aerodynamic Multiplier | RT0822.01-18 | 10/13/18 |



3. LIMITATIONS

- 3.1 Fire classification is not part of this acceptance.
- 3.2 For mortar or adhesive set tile applications, a static field uplift test shall be performed in accordance with TAS 106.
- 3.3 Applicant shall retain the services of a Miami-Dade County Certified Laboratory to perform quarterly test in accordance with TAS 112, appendix 'A'. Such testing shall be submitted to the Miami-Dade Product Control office for review.
- 3.4 Minimum underlayment shall be in compliance with the applicable Roofing Applications Standards listed section 4.1 herein.
- 3.5 30/90 hot mopped underlayment applications may be installed perpendicular to the roof slope unless stated otherwise by the underlayment material manufacturers published literature.
- 3.6 Mechanically attached tiles, minimum 4/12 slope.
- 3.7 This acceptance is for wood deck applications. Minimum deck requirements shall be in compliance with applicable building code.
- 3.8 All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

4. INSTALLATION

- 4.1 Braas/Modena S' Tile -Clay Roof Tile and its components shall be installed in strict compliance with Roofing Application Standard RAS 118, RAS 119, and RAS 120.
- 4.2 Data For Attachment Calculations

Table 1: Average Weight (W) and Dimensions (l x w)

| Tile Profile | Weight-W (lbf) | Length-l (ft) | Width-w (ft) |
|--------------------------------------|----------------|---------------|--------------|
| Braas/Modena S' Tile -Clay Roof Tile | 7.1 | 1.48 | 0.95 |

Table 2: Aerodynamic Multipliers - λ (ft³)

| Tile Profile | λ (ft ³) Batten Application | λ (ft ³) Direct Deck Application |
|--------------------------------------|--|---|
| Braas/Modena S' Tile -Clay Roof Tile | 0.26 | 0.28 |

Table 3: Restoring Moments due to Gravity - M_g (ft-lbf)

| Tile Profile | 2":12" | | 3":12" | | 4":12" | | 5":12" | | 6":12" | | 7":12" or greater | |
|--------------------------------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|---------|-------------|-------------------|-------------|
| Braas/Modena S' Tile -Clay Roof Tile | Battens | Direct Deck | Battens | Direct Deck | Battens | Direct Deck | Battens | Direct Deck | Battens | Direct Deck | Battens | Direct Deck |
| | N/A | 5.87 | N/A | 5.79 | 5.69 | 5.69 | 5.56 | 5.56 | 5.40 | 5.40 | 5.24 | 5.24 |

**Table 4: Attachment Resistance Expressed as a Moment - M_f (ft-lbf)
for Mechanically Attached Systems**

| Tile Profile | Fastener Type | Direct Deck (min 15/32" plywood) | Direct Deck (min. 19/32" plywood) | Battens |
|---|---|--|---|---------|
| Braas/Modena S' Tile -Clay Roof Tile | 2-10d Ring Shank Nails | 28.6 | 41.2 | 19.4 |
| | 1-10d Smooth or Screw Shank Nail | 5.1 | 6.8 | 2.8 |
| | 2-10d Smooth or Screw Shank Nails | 6.9 | 9.2 | 7.3 |
| | 1 #8 Screw | 20.7 | 20.7 | 18.1 |
| | 2 #8 Screw | 43.2 | 43.2 | 29.8 |
| | 1-10d Smooth or Screw Shank Nail (Field Clip) | 23.1 | 23.1 | 19.0 |
| | 1-10d Smooth or Screw Shank Nail (Eave Clip) | 29.3 | 29.3 | 24.0 |
| | 2-10d Smooth or Screw Shank Nails (Field Clip) | 27.6 | 27.6 | 38.6 |
| | 2-10d Smooth or Screw Shank Nails (Eave Clip) | 38.1 | 38.1 | 41.8 |

**Table 5: Attachment Resistance Expressed as a Moment - M_f (ft-lbf)
for Mechanically Attached Systems**

| Tile Profile | Fastener Type | Direct Deck (min 15/32" plywood) | Direct Deck (min. 19/32" plywood) | Battens |
|---|-------------------------------------|--|---|---------|
| Braas/Modena S' Tile -Clay Roof Tile | 2-10d Ring Shank Nails ¹ | 33.1 | 48.1 | 45.2 |

¹ Installation with a 4" tile headlap and fasteners are located a min. of 2½" from head of tile.

**Table 6: Attachment Resistance Expressed as a Moment M_f (ft-lbf)
for Two Paddy Adhesive Set Systems**

| Tile Profile | Tile Application | Minimum Attachment Resistance |
|---|-----------------------|----------------------------------|
| Braas/Modena S' Tile -Clay Roof Tile | Adhesive ¹ | 29.3 ² |

¹ See manufactures component approval for installation requirements.

² TILE BOND™ Roof Tile Adhesive; Average weight per paddy 10.7 grams.
ICP Adhesives and Sealants, Inc.'s ICP Adhesives Polyset AH-160; Average weight per paddy 8 grams.

**Table 7: Attachment Resistance Expressed as a Moment - M_f (ft-lbf)
for Single Paddy Adhesive Set Systems**

| Tile Profile | Tile Application | Minimum Attachment Resistance |
|--|------------------------------|--------------------------------------|
| Braas/Modena S' Tile -Clay Roof Tile | ICP Adhesives Polyset AH-160 | 66.5 ³ |
| | ICP Adhesives Polyset AH-160 | 38.7 ⁴ |
| 3 Large paddy placement of 63 grams of ICP Adhesives and Sealants, Inc.'s ICP Adhesives Polyset AH-160. | | |
| 1 Medium paddy placement of 24 grams of ICP Adhesives and Sealants, Inc.'s ICP Adhesives Polyset AH-160. | | |

**Table 8: Attachment Resistance Expressed as a Moment - M_f (ft-lbf)
for Mortar Set Systems**

| Tile Profile | Tile Application | Attachment Resistance |
|--|-------------------------|------------------------------|
| Braas/Modena S' Tile - Clay Roof Tile | Mortar Set ⁵ | 24.5 |
| 5 See specific mortar manufacturers Notice of Acceptance | | |

5. LABELING

All tiles shall bear the imprint or identifiable marking of the manufacturer's name or logo (See **Detail Below**), or following statement: "Miami-Dade County Product Control Approved".

MADE IN ITALY – Stab. CEPRANO -BRAAS-

**BRAAS/MODENA S' TILE -CLAY ROOF TILE
(LOCATED ON UNDERSIDE OF TILE)**

6. BUILDING PERMIT REQUIREMENTS:

6.1 Application for building permit shall be accompanied by copies of the following:

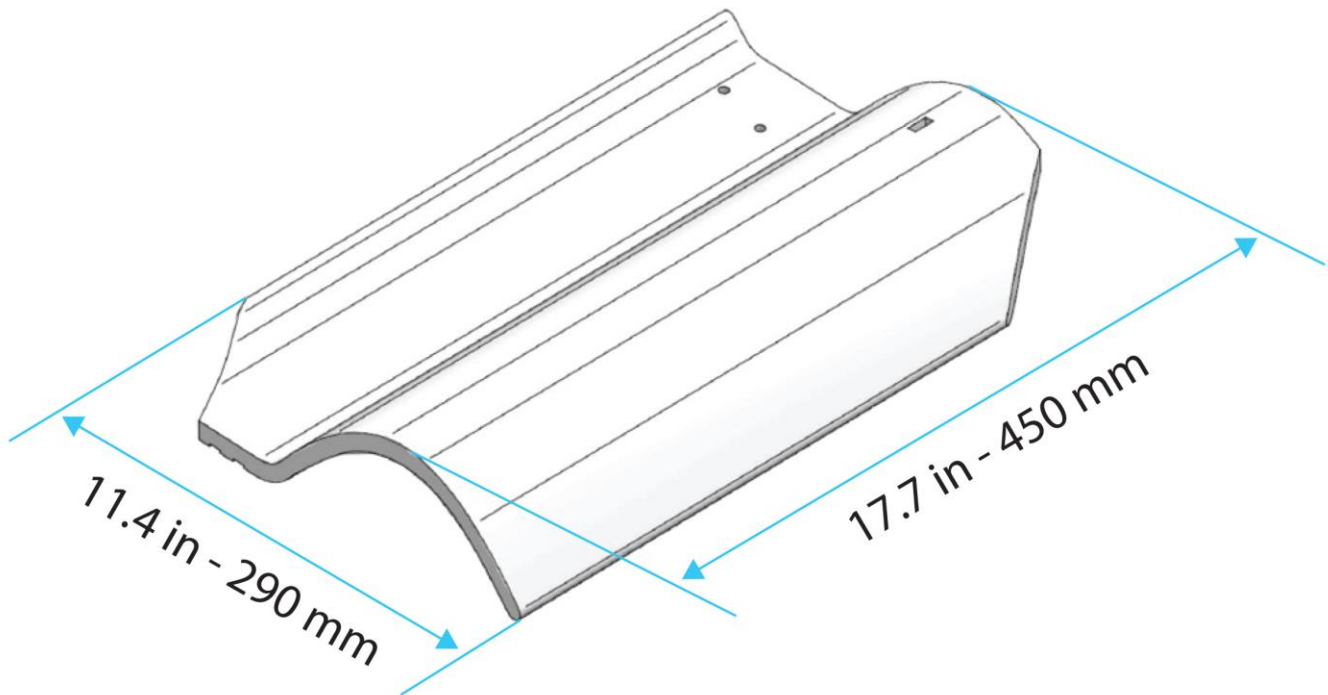
6.1.1 This Notice of Acceptance.

6.1.2 Any other documents required by Building Official or Applicable building code in order to properly evaluate the installation of this system.



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PROFILE DRAWINGS



BRAAS/MODENA S' TILE -CLAY ROOF TILE

END OF THIS ACCEPTANCE