



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/pera](http://www.miamidade.gov/pera)

**NOTICE OF ACCEPTANCE (NOA)**

**Miami Terracotta, LLC**  
**1985 South Park Road, Bay #3**  
**Pembroke Park FL 33009**

**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:** Brastile "S" 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 new NOA consists of pages 1 through 7.  
The submitted documentation was reviewed by Alex Tigera.

*Alex Tigera*  
4/13/17



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Approval Date: 03/02/17  
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## ROOFING ASSEMBLY APPROVAL

**Category:** Roofing  
**Sub Category:** Roofing Tiles  
**Material:** Clay

### 1. SCOPE

This approves a roofing system using **Brastile “S” Clay Roof Tile** manufactured by **Terracotagres Ceramica LTDA** in **Sangao SC Brazil** and distributed by Miami Terracota LLC., 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 Applicant</u> | <u>Dimensions</u>  | <u>Test Specifications</u>   | <u>Product Description</u>  |
|----------------------------------|--|------------------------------|---|
| Brastile “S” Clay Roof Tile      | L = 20.4”<br>W = 12”<br>0.38” thick nominal<br>3.5” high | TAS 112<br>Type 1<br>Grade 3 | High profile clay roof tile. For direct deck adhesive set applications with the nominal interlocking headlap.               |
| Trim Pieces                      | Length: varies<br>Width: varies<br>varying thickness     | TAS 112                      | 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 (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.           |

#### 2.2 MANUFACTURING LOCATION

2.2 Sangao SC Brazil



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### 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    |
| <i>Walker Engineering, Inc.</i>          | 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    |
| ATL of South Florida                     | RTI1110.01-16          | ASTM C 1167   | 11/22/16      |
|  | RT1110.02-16           | TAS 101   | 12/06/16      |

### 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 in accordance with TAS 106 may required, refer to applicable building code.
- 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 Regulatory and Economic Development Department – Product Control Section 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 This acceptance is for wood deck applications. Minimum deck requirements shall be in compliance with applicable building code.
- 3.7 May be installed on sloped 7:12 or greater.



#### 4. INSTALLATION

- 4.1 Brastile “S” 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) |
| Brastile “S”  | 9.3            | 1.70          | 1            |

| Table 2: Aerodynamic Multipliers - $\lambda$ (ft <sup>3</sup> ) |  |   |
|---|--|---|
| Tile Profile  | $\lambda$ (ft <sup>3</sup> )<br>Batten Application | $\lambda$ (ft <sup>3</sup> )<br>Direct Deck Application |
| Brastile “S”  | N/A  | 0.35  |

| 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 |             |
|  | Battens | Direct Deck | Battens | Direct Deck | Battens | Direct Deck | Battens | Direct Deck | Battens | Direct Deck | Battens           | Direct Deck |
| Brastile “S”   | N/A     | 7.7         | N/A     | 7.6         | N/A     | 7.45        | N/A     | 7.27        | N/A     | 7.07        | N/A               | 6.85        |

| Table 4: Attachment Resistance Expressed as a Moment - $M_r$ (ft-lbf)<br>for Mechanically Attached Systems |   |  |  |   |         |
|--|---|--|--|---|---------|
| Tile Profile   | Fastener Type                                     |  | Direct Deck<br>(min 15/32”<br>plywood) | Direct Deck<br>(min. 19/32”<br>plywood) | Battens |
| Brastile “S”   | 2-10d Ring Shank Nails                            |  | 28.6                                   | 41.2                                    | N/A     |
|  | 1-10d Smooth or Screw Shank Nail                  |  | 5.1                                    | 6.8                                     | N/A     |
|  | 2-10d Smooth or Screw Shank Nails                 |  | 6.9                                    | 9.2                                     | N/A     |
|  | 1 #8 Screw  |  | 20.7                                   | 20.7                                    | N/A     |
|  | 2 #8 Screw  |  | 43.2                                   | 43.2                                    | N/A     |
|  | 1-10d Smooth or Screw Shank Nail<br>(Field Clip)  |  | 23.1                                   | 23.1                                    | N/A     |
|  | 1-10d Smooth or Screw Shank Nail<br>(Eave Clip)   |  | 29.3                                   | 29.3                                    | N/A     |
|  | 2-10d Smooth or Screw Shank Nails<br>(Field Clip) |  | 27.6                                   | 27.6                                    | N/A     |
|  | 2-10d Smooth or Screw Shank Nails<br>(Eave Clip)  |  | 38.1                                   | 38.1                                    | N/A     |



**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 |
|--------------|-------------------------------------|----------------------------------|-----------------------------------|---------|
| Brastile "S" | 2-10d Ring Shank Nails <sup>1</sup> | 33.1                             | 48.1                              | 45.2    |

<sup>1</sup> 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 |
|--------------|-----------------------|-------------------------------|
| Brastile "S" | Adhesive <sup>1</sup> | 29.3 <sup>2</sup>             |

<sup>1</sup> See manufactures component approval for installation requirements.

<sup>2</sup> TILE BOND™ Roof Tile Adhesive; Average weight per paddy 10.7 grams  
or.

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 |
|--------------|------------------------------|-------------------------------|
| Brastile "S" | ICP Adhesives Polyset AH-160 | 66.5 <sup>3</sup>             |
|              | ICP Adhesives Polyset AH-160 | 56.2 <sup>4</sup>             |
|              | ICP Adhesives Polyset AH-160 | 38.7 <sup>5</sup>             |

<sup>3</sup> Large paddy placement of 63 grams

<sup>4</sup> Large paddy placement of 45 grams

<sup>5</sup> Medium paddy placement of 24 grams

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

| Tile Profile | Tile Application        | Attachment Resistance |
|--------------|-------------------------|-----------------------|
| Brastile "S" | Mortar Set <sup>5</sup> | 24.5                  |

<sup>6</sup> See specific mortar manufacturers Notice of Acceptance



## 5. LABELING

5.1 All tiles shall bear the imprint or identifiable marking of the manufacturer's name or logo as detailed below, or following statement: "Miami-Dade County Product Control Approved".



**BRASTILE**  
**Sangão – SC**  
**Made in Brazil**

**LABEL FOR BRASTILE “S” CLAY ROOF TILE**  
**(LOCATED ON THE SIDE OF TILE)**

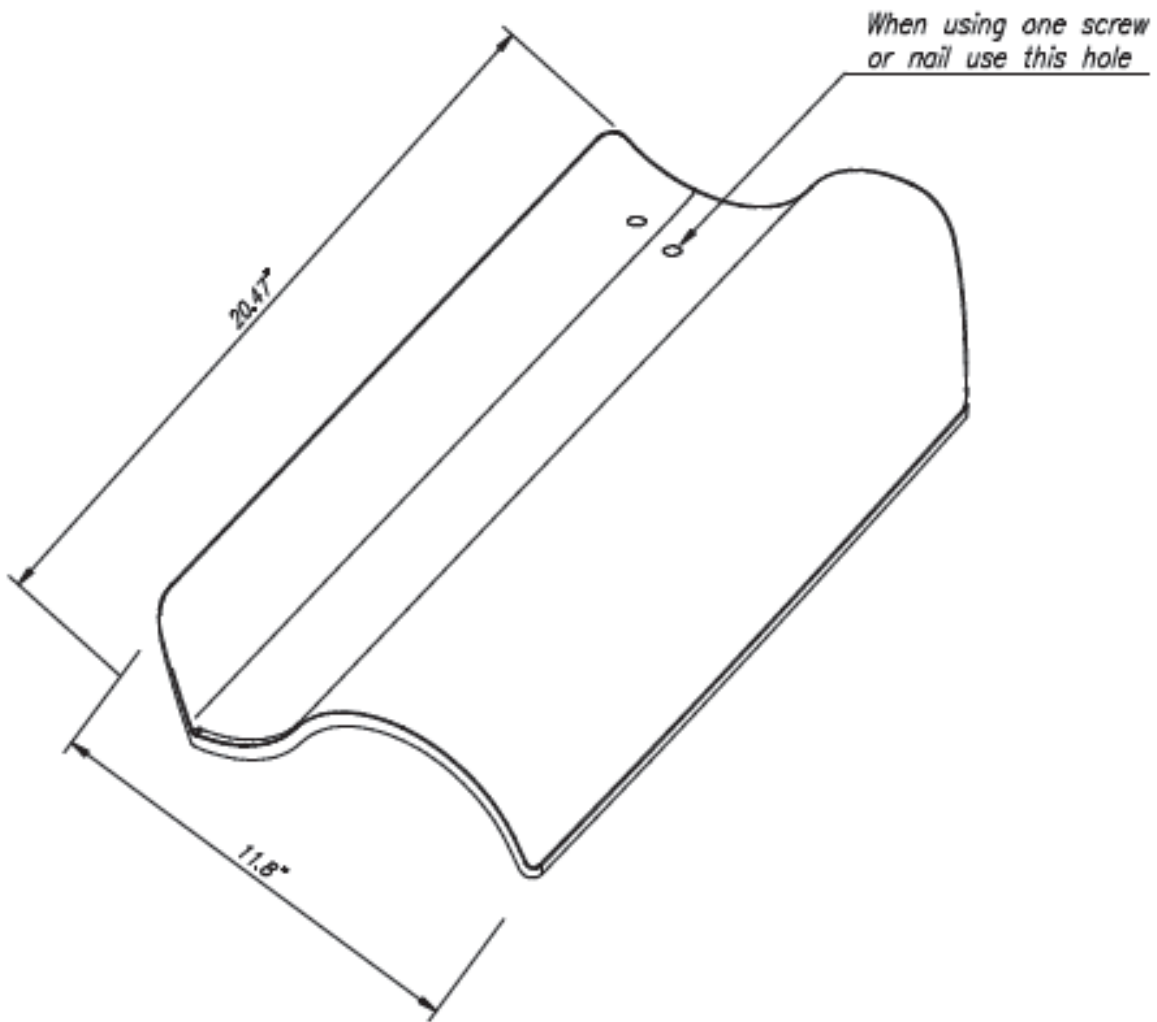
## 6. BUILDING PERMIT REQUIREMENTS:

- 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 DRAWING



**TOPTELHA M14 SPANISH 'S' CLAY ROOF TILE**

**END OF THIS ACCEPTANCE**