



BUILDING CODE COMPLIANCE OFFICE (BCCO)  
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING  
140 WEST FLAGLER STREET, SUITE 1603  
MIAMI, FLORIDA 33130-1563  
(305) 375-2901 FAX (305) 375-2908

**NOTICE OF ACCEPTANCE (NOA)**

**U.S. Tile**  
**12690 NW South River Drive**  
**Medley, FL. 33178**

**SCOPE:**

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by the BCCO and accepted by the Building Code and Product Review Committee 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division 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: Real 'S' Clay 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 revises NOA# 06-1213.04 and consists of pages 1 through 9.  
The submitted documentation was reviewed by Alex Tigera.



NOA No.: 09-1027.20  
Expiration Date: 04/13/11  
Approval Date: 01/13/10  
Page 1 of 9

## ROOFING ASSEMBLY APPROVAL

**Category:** Roofing  
**Sub-Category:** 07320 Roofing Tiles  
**Material:** Clay  
**Deck Type:** Wood

### 1. SCOPE

This approves a new roofing system using "Real 'S' Clay Tile" as manufactured by U.S. Tile and 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>
Real 'S' Tile	L = 18.25" W = 12.5"	ASTM C1167	High profile clay roof tile. For direct deck or battened nail-on applications.
Trim Pieces	l = varies w = varies varying thickness	ASTM C1167	Accessory trim, clay roof pieces for use at hips, rakes, ridges and valley terminations. Manufactured for each tile profile.

#### 2.1 SUBMITTED EVIDENCE:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
PRI Construction Materials Technology	UST-005-02-01	TAS 101	Mar. 2008
IBA Consultants, Inc.	4318-15	ASTM C 1167	Aug. 2007
IBA Consultants, Inc.	4318-30	TAS 101	June 2008
Redland Technologies	7161-03 Appendix III	Static Uplift Testing PA 102 & 102(A)	Dec. 1991
Redland Technologies	Letter Dated Aug. 1, 1994	Wind Tunnel Testing PA 108 (Nail-On)	Aug. 1994
Redland Technologies	P09647-01	Wind Tunnel Testing PA 108 (Mortar Set)	Aug. 1994
Redland Technologies	P0402	Withdrawal Resistance Testing of screw vs. smooth shank nails	Sept. 1993
The Center for Applied Engineering, Inc.	94-083	Static Uplift Testing PA 101 (Adhesive Set)	April 1994



The Center for Applied Engineering, Inc.	94-084	Static Uplift Testing PA 101 (Mortar Set)	May 1994
The Center for Applied Engineering, Inc.	25-7094-(3, 6 & 9)	Static Uplift Testing PA 102	Oct. 1994
The Center for Applied Engineering, Inc.	25-7120-(1 & 2)	Static Uplift Testing PA 102	Nov. 1994
The Center for Applied Engineering, Inc.	25-7183-(3 & 4)	Static Uplift Testing PA 102	Feb. 1995
The Center for Applied Engineering, Inc.	25-7214-(3, 4, &7)	Static Uplift Testing PA 102	March, 1995
The Center for Applied Engineering, Inc.	25-7804-4	Static Uplift Testing PA 102	Sep. 1996
Celotex Corporation Testing Services	520111-3	Static Uplift Testing PA 101	Dec. 1998
Celotex Corporation Testing Services	520191-2-1	Static Uplift Testing PA 101	March 1999

### 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 Building Code Compliance Office for review.
- 3.4 Minimum underlayments 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.



**4. INSTALLATION**

- 4.1 Real "S" Clay Tile and its components shall be installed in strict compliance with Roofing Application Standard RAS 118, RAS 119 and RAS 120.
- 4.2 Real "S" Clay Tile may be installed with various starter tile configurations as detailed below:
  - i. The US Tile Real S may be installed with only US Tile Real S tiles as per RAS 118, RAS 119 and RAS 120. **See Detail B.**
  - ii. The US Tile Faux starter system can be installed with starter barrel pan and cap tiles set in a full bed of adhesive and/or mortar. **See Detail C.**
  - iii. One or more additional booster tiles made from the US Tile Mission Clay Barrel may be installed to achieve the desired aesthetics. The booster pieces shall have a minimum length of three inch and shall be installed in a full bed of adhesive and/or mortar or mechanically fastened with any approved #12 pan head insulation screw of sufficient length to penetrate 3/16 of an inch through the sheeting. **See Detail D.**
- 4.3 The starter options listed in 4.2 are followed with US Tile Real S tile for the remainder of the roof.
- 4.4 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)
Real 'S' Clay Tile	8.3	1.54	1.02

Table 2: Aerodynamic Multipliers - $\lambda$ (ft <sup>3</sup> )	
Tile Profile	$\lambda$ (ft <sup>3</sup> ) Direct Deck Application
Real 'S' Clay Tile	0.310

Table 3: Restoring Moments due to Gravity - $M_g$ (ft-lbf)						
Tile Profile	2":12"	3":12"	4":12"	5":12"	6":12"	Greater than 7":12"
Real 'S' Clay Tile	Direct Deck					
	5.71	5.63	5.51	5.34	5.12	4.83



Table 4: Attachment Resistance Expressed as a Moment - $M_r$ (ft-lbf) for Nail-On Systems			
Tile Profile	Fastener Type	Direct Deck (min 15/32" plywood)	Direct Deck (min. 19/32" plywood)
Real 'S' Clay Tile	2-10d Ring Shank Nails	28.6	41.2
	1-10d Smooth or Screw Shank Nail	5.1	6.8
	2-10d Smooth or Screw Shank Nails	6.9	9.2
	1 #8 Screw	20.7	20.7
	2 #8 Screw	43.2	43.2
	1-10d Smooth or Screw Shank Nail (Field Clip)	23.1	23.1
	1-10d Smooth or Screw Shank Nail (Eave Clip)	29.3	29.3
	2-10d Smooth or Screw Shank Nails (Field Clip)	27.6	27.6
	2-10d Smooth or Screw Shank Nails (Eave Clip)	38.1	38.1
	2-10d Ring Shank Nails <sup>1</sup>	33.1	48.1

1. Installation with a tile headlap minimum 2-1/2" or maximum 3" and/or limited by design.

Table 5: Attachment Resistance Expressed as a Moment $M_r$ (ft-lbf) for Two Patty Adhesive Set Systems		
Tile Profile	Tile Application	Minimum Attachment Resistance
Real 'S' Clay Tile	Polyfoam PolyPro <sup>TM1</sup> - Average weight per patty 10 grams.	47.9
	TileBond <sup>1</sup> - Average weight per patty 8 grams.	36.5

1 See manufactures component approval for installation requirements.

Table 5A: Attachment Resistance Expressed as a Moment - $M_r$ (ft-lbf) for Single Patty Adhesive Set Systems		
Tile Profile	Tile Application	Minimum Attachment Resistance
Real 'S' Clay Tile	Polyfoam PolyPro <sup>TM</sup> , average patty weight 63 grams	62.10
	Polyfoam PolyPro <sup>TM</sup> , average patty weight 24 grams	38.70
	Polyfoam PolyPro <sup>TM</sup> , average patty weight 58.7 grams	51.28

Table 5B: Attachment Resistance Expressed as a Moment - $M_r$ (ft-lbf) for Mortar Set Systems		
Tile Profile	Tile Application	Attachment Resistance
Real 'S' Clay Tile	Mortar Set <sup>5</sup>	24.5

5 Tile-Tite Roof Tile Mortar.



**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".

# TRINIDAD UST

**LABEL FOR REAL 'S' CLAY TILE  
(LOCATED ON THE UNDERSIDE OF TILE)**

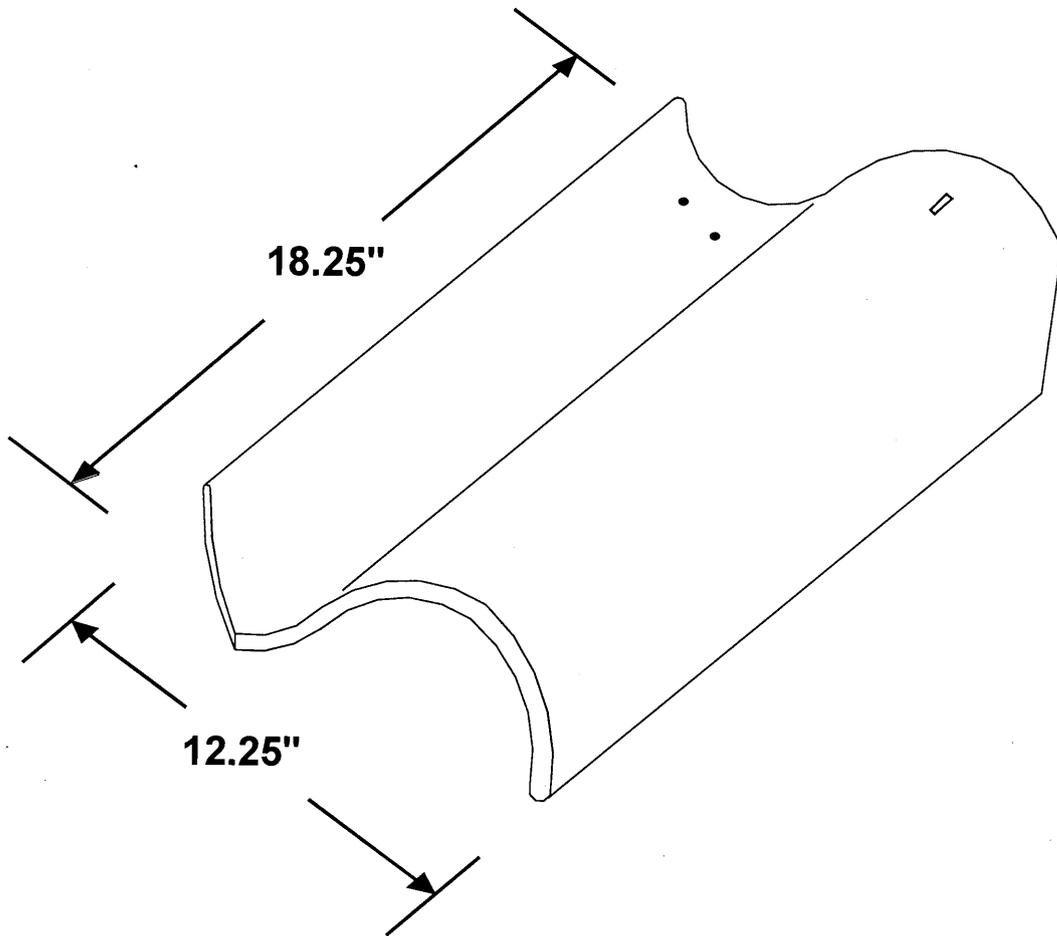
**6. BUILDING PERMIT REQUIREMENTS**

- 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 the Building Official or applicable building code in order to properly evaluate the installation of this system.



NOA No.: 09-1027.20  
Expiration Date: 04/13/11  
Approval Date: 01/13/10  
Page 6 of 9

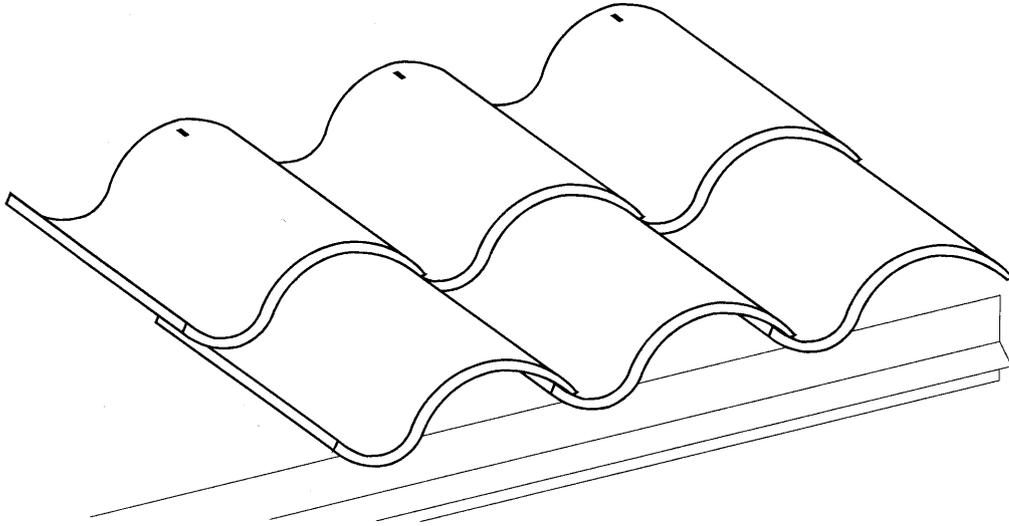
**PROFILE DRAWING  
DETAIL A**



**REAL 'S' CLAY TILE**

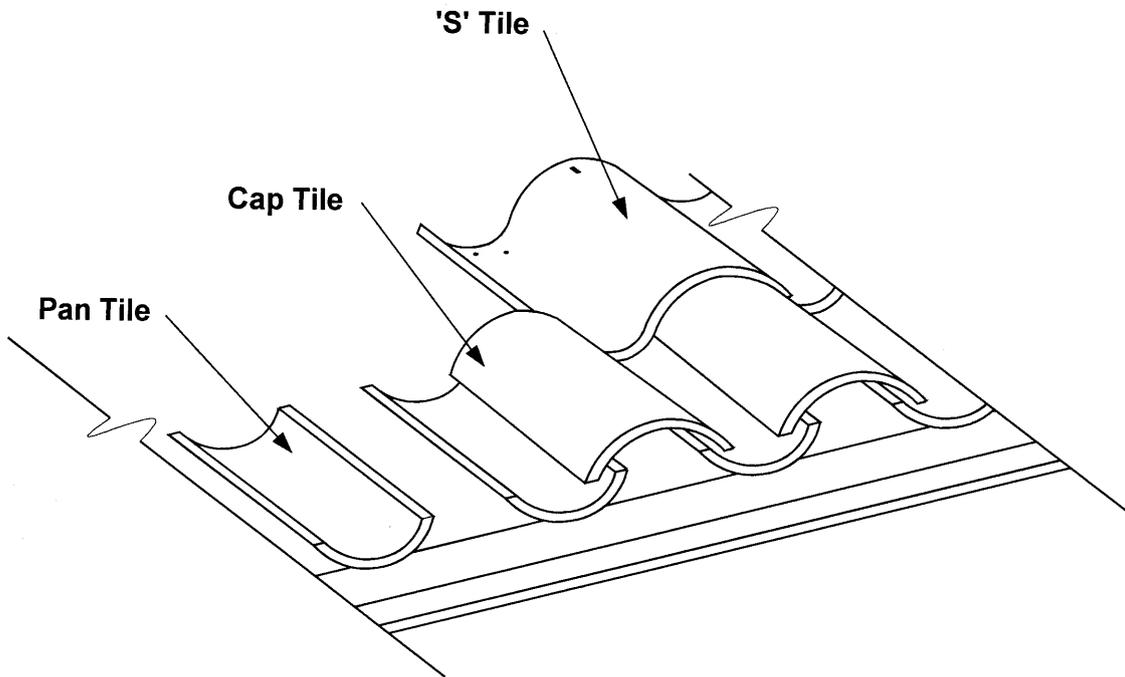


**DETAIL B**



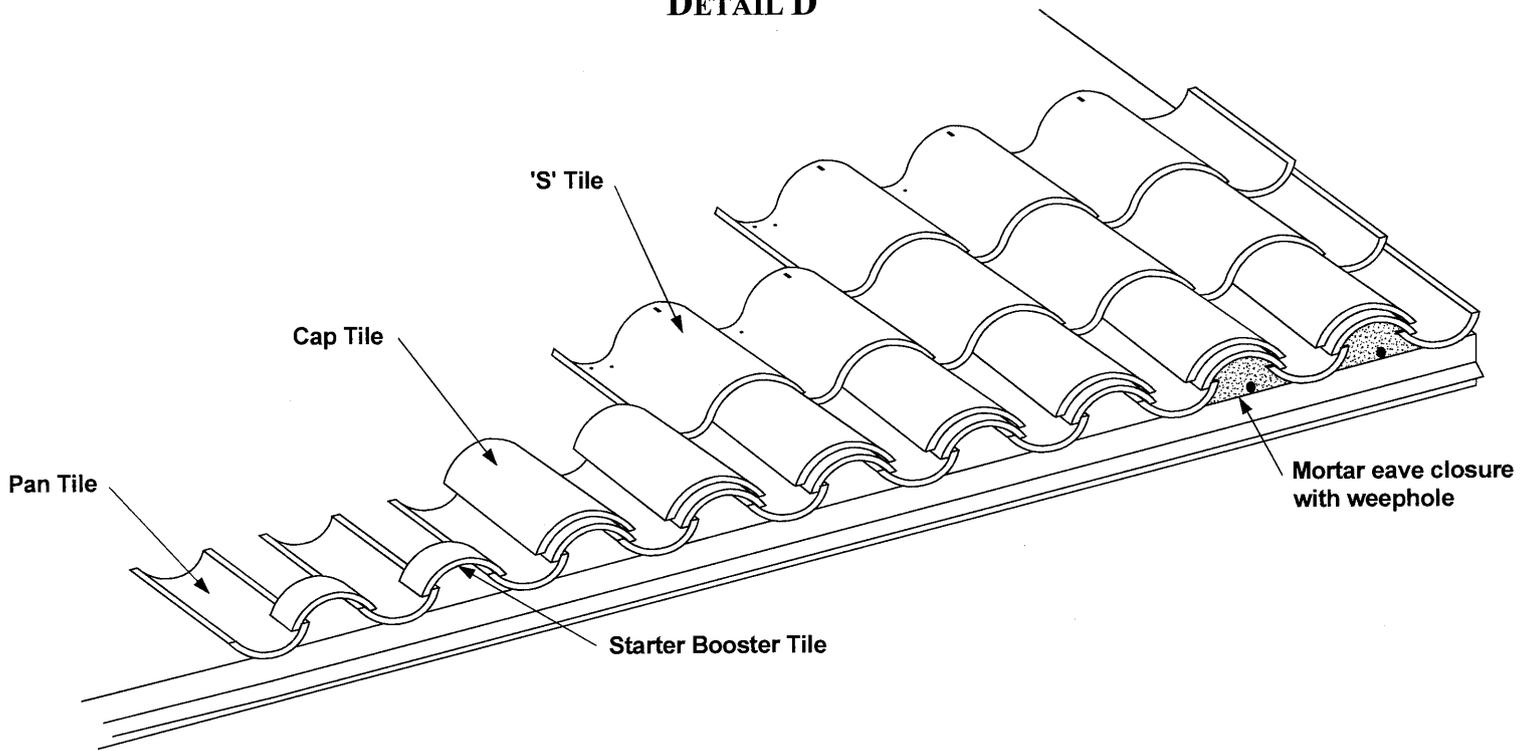
**STARTER WITH REAL S TILE AS PER RAS 118, RAS 119, AND RAS 120**

**DETAIL C**

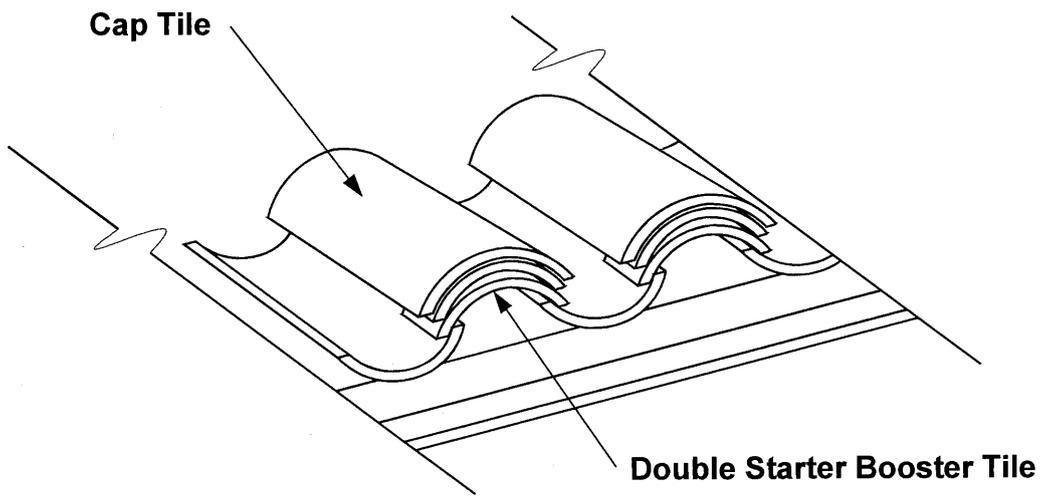


**FAUX STARTER SYSTEM WITH BARREL PAN AND CAP TILE**

**DETAIL D**



**FAUX STARTER SYSTEM WITH BOOSTER TILE(S) AND BARREL PAN AND CAP TILE**



**MULTIPLE BOOSTER TILE STARTER DETAIL**

**END OF THIS ACCEPTANCE**



NOA No.: 09-1027.20  
Expiration Date: 04/13/11  
Approval Date: 01/13/10  
Page 9 of 9