

**SECTION 1524**  
**HIGH VELOCITY HURRICANE ZONES REQUIRED OWNERS NOTIFICATION FOR ROOFING**  
**CONSIDERATIONS**

As it pertains to this section, it is the responsibility of the roofing contractor to provide the owner with the required roofing permit, and to explain to the owner the content of this section. The provisions of Chapter 15 of the Florida Building Code, Building govern the minimum requirements and standards of the industry for roofing system installations. Additionally, the following items should be addressed as part of the agreement between the owner and the contractor. The owner's initial in the designated space indicates that the item has been explained.

JP 1. **Aesthetics-Workmanship:** The workmanship provisions of Chapter 15 (High Velocity Hurricane Zone) are for the purpose of providing that the roofing system meets the wind resistance and water intrusion performance standards. Aesthetics (appearance) are not a consideration with respect to workmanship provisions. Aesthetic issues such as color or architectural appearance, that are not part of a zoning code, should be addressed as part of the agreement between the owner and the contractor.

JP 2. **Renailing Wood Decks:** When replacing roofing, the existing wood roof deck may have to be renailed in accordance with the current provisions of Chapter 16 (High Velocity Hurricane Zones) of the. (The roof deck is usually concealed prior to removing the existing roof system).

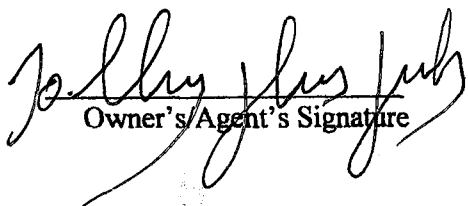
JP 3. **Common Roofs:** Common roofs are those which have no visible delineation between neighboring units (i.e., townhouses, condominiums, etc.). In buildings with common roofs, the roofing contractor and/or owner should notify the occupants of adjacent units of roofing work to be performed.

JP 4. **Exposed ceilings:** Exposed, open beam ceilings are where the underside of the roof decking can be viewed from below. The owner may wish to maintain the architectural appearance; therefore, roofing nail penetrations of the underside of the decking may not be acceptable. This provides the option of maintaining this appearance.

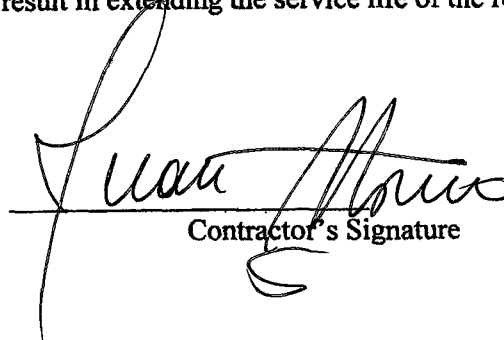
JP 5. **Ponding Water:** The current roof system and/or deck of the building may not drain well and may cause water to pond (accumulate) in low-lying areas of the roof. Ponding can be an indication of structural distress and may require the review of a professional structural engineer. Ponding may shorten the life expectancy and performance of the new roofing system. Ponding conditions may not be evident until the original roofing system is removed. Ponding conditions should be corrected.

JP 6. **Overflow Scuppers (wall outlets):** It is required that rainwater flow off so that the roof is not overloaded from a buildup of water. Perimeter/edge walls or other roof extensions may block this discharge if overflow scuppers (wall outlets) are not provided. It may be necessary to install overflow scuppers in accordance with the requirements of:

JP 7. **Ventilation:** Most roof structures should have some ability to vent natural airflow through the interior of the structural assembly (the building itself). The existing amount of attic ventilation shall not be reduced. It may be beneficial to consider additional venting which can result in extending the service life of the roof.

  
Owner's Agent's Signature

8/8/06  
Date

  
Contractor's Signature

**SECTION 1525  
HIGH-VELOCITY HURRICANE ZONES UNIFORM PERMIT APPLICATION**

**Florida Building Code Edition 2004**  
High-Velocity Hurricane Zone Uniform Permit Application Form

City of Miami Beach  
Building Department  
Roofing Permit  
**OFFICE COPY**

**INSTRUCTION PAGE**

**COMPLETE THE NECESSARY SECTIONS OF  
THE UNIFORM ROOFING PERMIT  
APPLICATION FORM AND ATTACH THE  
REQUIRED DOCUMENTS AS NOTED BELOW:**

Review Type	Initials	Date	Bond
Building	JP	8/9/06	
Permit	E	08/09/06	

Roof System	Required Sections of the Permit Application Form	Attachments Required See List Below
Low Slope Application	A,B,C	1,2,3,4,5,6,7
Prescriptive BUR-RAS 150	A,B,C	4,5,6,7
Asphaltic Shingles	A,B,D	1,2,4,5,6,7
Concrete or Clay Tile	A,B,D,E	1,2,3,4,5,6,7
Metal Roofs	A,B,D	1,2,3,4,5,6,7
Wood Shingles and Shakes	A,B,D	1,2,4,5,6,7
Other	As Applicable	1,2,3,4,5,6,7

**ATTACHMENTS REQUIRED:**

1.	Fire Directory Listing Page
2.	From Product Approval: Front Page Specific System Description Specific System Limitations General Limitations Applicable Detail Drawings
3.	Design Calculations per Chapter 16, or If Applicable, RAS 127 or RAS 128
4.	Other Component of Product Approval
5.	Municipal Permit Application
6.	Owners Notification for Roofing Considerations (Reroofing Only)
7.	Any Required Roof Testing/Calculation Documentation

# Florida Building Code Edition 2004

High-Velocity Hurricane Zone Uniform Permit Application Form.

## Section A (General Information)

Master Permit No. \_\_\_\_\_

Contractor's Name **JUAN G MORENO INC.**

Phone 305-673-7080

Fax 305-673-7028

Job Address **10 W SAN MARINO DR, MIAMI BEACH FLORIDA**

Process No./Zoning \_\_\_\_\_

Engineering \_\_\_\_\_

33139 Public Works

City of Miami Beach  
Building Department  
Roofing Permit  
OFFICE COPY

Review Type	Initials	Date	Bond
Building	U	8/9/06	
Planning	E	08/09/06	
Engineering	for	08/10/06	
Public Works	B. Duval	8/9/06	

THIS PLAN REVIEW CONSTITUTES APPROVAL FOR **ROOF CATEGORY**  
OBTAINING BUILDING PERMITS ONLY.

☐ Low Slope ☐ Mechanically Fastened Tile

☒ Mortar/Adhesive Set Tile

☐ Asphalt Shingles ☐ Metal Panel/Shingles

☐ Wood Shingles/Shakes

All construction and/or use of equipment in the right-of-way pad/over easements, requires a separate Public Works Department permit prior to start of construction.

☐ Prescriptive BUR-RAS 150

Permit Requirements: Proof of existing sidewalk/swale area conditions (pictures) and/or drawings of sidewalk/roadway/bonds.

☐ New Roof ☒ Reroofing ☐ Recovering

☐ Repair

☐ Maintenance

(Public Works Inspection of the right-of-way will be required prior to final sign-off on the C.C. / C.O., or the release of bonds.)

ROOF SYSTEM INFORMATION

Low Slope Roof Area (SF)

Steep Sloped Roof Area (SF)

2,238

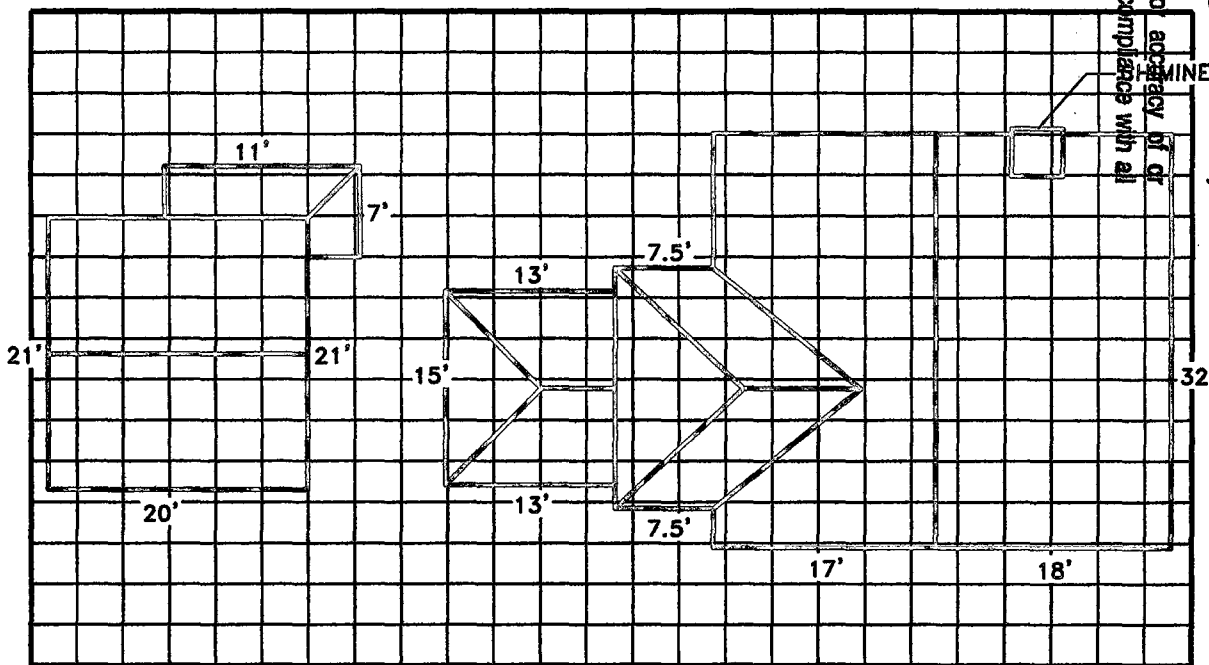
Total (SF)

Approved/Reviewed By: *B. Duval*

Date: *8/9/06*

## Section B (Roof Plan)

Sketch Roof Plan: Illustrate all levels and sections, roof drains, scuppers, overflow scuppers and overflow drains. Include dimensions of sections and levels, clearly identify dimensions of elevated pressure zones and location of parapets.



NOTICE: In addition to the requirement of this permit, there may be additional restrictions applicable to this property that may be found in the Public Records of this County and there may be additional permits required from other government entities, such as state agencies, or federal agencies. The City of Miami Beach assumes no responsibility for accuracy of or results from these plans which are approved subject to compliance with all Federal, State, and Local Laws, Rules, and Regulations. 2-22-06

**Florida Building Code Edition 2004**  
 High-Velocity Hurricane Zone Uniform Permit Application Form

**Section D (Steep Sloped Roof System)**

City of Miami Beach Building Department Roofing Permit OFFICE COPY			
Review Type	Initials	Date	Board
Building			
Zoning			
Engineering			
Public Works			

**Roof System Manufacturer:** MONIER LIFETILE

**Notice of Acceptance Number:** 02-1205.04

**Minimum Design Wind Pressures, If Applicable (From RAS 127 or Calculations):**  
 P1: -47.1 P2: -99.4 P3: -99.4

**Maximum Design Pressure  
(From the Product Approval Specific System):**

**Steep Sloped Roof System Description**

<p><b>Roof Slope:</b> 4 : 12</p> <p><b>Ridge Ventilation?</b></p> <p><b>Mean Roof Height:</b> 25'</p>	<b>Deck Type:</b> 5/8" Plywood Deck
	<b>Type Underlayment:</b> #30 ASTM With a 4" overlap between rolls
	<b>Insulation:</b> N/A
	<b>Fire Barrier:</b> N/A
	<b>Fastener Type &amp; Spacing:</b> Underlayment: 1 1/4" Ring Shank Nails 6" O/C @ Laps & Rows 6" O/C
	<b>Adhesive Type:</b> Asphalt Type IV
	<b>Type Cap Sheet:</b> #90 Felt Back-nailed 12" oc @ Laps
	<b>Roof Covering:</b> Espana Concrete Roof Tile Adhesive-Ploypro AH160
	<b>Type &amp; Size Drip Edge:</b> 3"x3" Galvanized

**Florida Building Code Edition 2004**  
**High-Velocity Hurricane Zone Uniform Permit Application Form.**

**Section E (Tile Calculations)**

For Moment based tile systems, choose either Method 1 or 2. Compare the values for  $M_r$  with the values from  $M_f$ . If the  $M_f$  values are greater than or equal to the  $M_r$  values, for each area of the roof, then the tile attachment method is acceptable.

**Method 1 "Moment Based Tile Calculations Per RAS 127"**

~~$$(P_1: \quad \times \lambda \quad = \quad ) - Mg: \quad = M_{r1} \quad \text{Product Approval } M_f \quad$$

$$(P_2: \quad \times \lambda \quad = \quad ) - Mg: \quad = M_{r2} \quad \text{Product Approval } M_f \quad$$

$$(P_3: \quad \times \lambda \quad = \quad ) - Mg: \quad = M_{r3} \quad \text{Product Approval } M_f \quad$$~~

**Method 2 "Simplified Tile Calculations Per Table Below"**

Required Moment of Resistance ( $M_r$ ) From Table Below 33.8      Product Approval  $M_f$  38.7

<b><math>M_r</math> required Moment Resistance*</b>					
Mean Roof Height → Roof Slope ↓	15'	20'	25'	30'	40'
2:12	34.4	36.5	38.2	39.7	42.2
3:12	32.2	34.4	36.0	37.4	39.8
4:12	30.4	32.2	33.8	35.1	37.3
5:12	28.4	30.1	31.6	32.8	34.9
6:12	26.4	28.0	29.4	30.5	32.4
7:12	24.4	25.9	27.1	28.2	30.0

\*Must be used in conjunction with a list of moment based tile systems endorsed by the Broward County Board of Rules and Appeals.

For Uplift based tile systems use Method 3. Compared the values for  $F'$  with the values for  $F_r$ . If the  $F'$  values are greater than or equal to the  $F_r$  values, for each area of the roof, then the tile attachment method is acceptable.

**Method 3 "Moment Based Tile Calculations Per RAS 127"**

~~$$(P_1: \quad \times L \quad = \quad \times w: \quad = \quad ) - W: \quad \times \cos \theta \quad = F_{r1} \quad \text{Product Approval } F' \quad$$

$$(P_2: \quad \times L \quad = \quad \times w: \quad = \quad ) - W: \quad \times \cos \theta \quad = F_{r2} \quad \text{Product Approval } F' \quad$$

$$(P_3: \quad \times L \quad = \quad \times w: \quad = \quad ) - W: \quad \times \cos \theta \quad = F_{r3} \quad \text{Product Approval } F' \quad$$~~

<b>Where to Obtain Information</b>		
Description	Symbol	Where to find
Design Pressure	P1 or P2 or P3	RAS 127 Table 1 or by an engineering analysis prepared by PE based on ASCE 7
Mean Roof Height	H	Job Site
Roof Slope	$\theta$	Job Site
Aerodynamic Multiplier	$\lambda$	Product Approval
Restoring Moment due to Gravity	$M_g$	Product Approval
Attachment Resistance	$M_f$	Product Approval
Required Moment Resistance	$M_r$	Calculated
Minimum Attachment Resistance	$F'$	Product Approval
Required Uplift Resistance	$F_r$	Calculated
Average Tile Weight	W	Product Approval
Tile Dimensions	L = length W = width	Product Approval

All calculations must be submitted to the building official at the time of permit application.



**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)**

**Monier Lifetile, LLC  
135 NW 20<sup>th</sup> Street  
Boca Raton, FL 33431**

### **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 Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

**NOTICE:** In addition to the requirement of this permit, there may be additional restrictions applicable to this property that may be found in the Public Records of this County and there may be additional permits required from other government entities such as water management's districts, state agencies, or federal agencies.

The City of Miami Beach assumes no responsibility for accuracy of or results from these plans which are approved subject to compliance with all Federal, State and Local Laws, Rules and Regulations.

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 High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION: Mission 'S' and Espana™ Mission Concrete 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 consists of pages 1 through 6.

The submitted documentation was reviewed by Frank Zuloaga, RRC



**NOA No.: 02-1205.04  
Expiration Date: 12/16/07  
Approval Date: 01/02/03  
Page 1 of 6**

## ROOFING ASSEMBLY APPROVAL

**Category:** Roofing  
**Sub-Category:** High Profile Roofing Tiles  
**Material:** Concrete

### 1. SCOPE

This renews a system using Monier Lifetile Mission 'S' and Espana™ Mission Concrete Roof Tile, as manufactured Monier Lifetile LLC 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>
Monier Lifetile LLC Mission 'S' Tile	l = 16½" w = 13" ½" thick	PA 112	High profile, interlocking, one-piece, 'S' shaped, high-pressure extruded concrete roof tile equipped with two nail holes. For direct deck or battened nail-on, mortar set or adhesive set applications.
Monier Lifetile LLC Espana Mission Tile	L = 17" W = 12 ¾" ½" thick	PA 112	High profile, interlocking, one-piece, 'S' shaped, high-pressure extruded concrete roof tile equipped with two nail holes. For direct deck or battened nail-on, mortar set or adhesive set applications.
Trim Pieces	l = varies w = varies varying thickness	PA 112	Accessory trim, concrete 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>
Redland Technologies	7161-03 Appendix III	Static Uplift Testing PA 102 & PA 102(A)	Dec. 1991
Redland Technologies	7161-03 Appendix II	Wind Tunnel Testing PA 108(Nail-On)	Dec. 1991
Redland Technologies	P0402	Withdrawal Resistance Testing of screw vs. smooth shank nails	Sept. 1993
Redland Technologies	Letter Dated Aug. 1, 1994	Wind Tunnel Testing PA 108 (Nail-On)	Aug. 1994
Redland Technologies	P0631-01	Wind Tunnel Testing PA 108 (Mortar Set)	July 1994



NOA No.: 02-1205.04  
Expiration Date: 12/16/07  
Approval Date: 01/02/03  
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<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
Professional Service Industries, Inc.	IC-1320-94	Physical Properties PA 112	Feb. 1995
The Center for Applied Engineering, Inc.	25-7688-3	Static Uplift Testing	June 1996
	25-7688-10	PA 101 (Adhesive Set) PA 101 (Mortar Set)	July 1996
The Center for Applied Engineering, Inc.	25-7688-5	Static Uplift Testing PA 102 (3" Headlap, Nails, Direct Deck, New Construction)□	June 1996
The Center for Applied Engineering, Inc.	25-7688-4	Static Uplift Testing PA 102 (4" Headlap, Nails, Clips)	June 1996
Celotex Corporation Testing Services	520111-3	Static Uplift Testing	Dec. 1998
	520191-2-1	PA 101	March 1999
Walker Engineering, Inc.	Calculations	Aerodynamic Multiplier	March 1999
Walker Engineering, Inc.	Calculations	Two Patty Adhesive Set System	April 1999
Walker Engineering, Inc.	Evaluation Calculations	25-7183	March 1995
Walker Engineering, Inc.	Evaluation Calculations	25-7094	February 1996
Walker Engineering, Inc.	Evaluation Calculations	25-7496	April 1996
Walker Engineering, Inc.	Evaluation Calculations	25-7584 25-7804b-8 25-7804-4 & 5 25-7848-6	December 1996

### 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 RAS 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 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.



NOA No.: 02-1205.04  
Expiration Date: 12/16/07  
Approval Date: 01/02/03  
Page 3 of 6



#### 4. INSTALLATION

4.1 Monier Lifetile Mission 'S' and Espana™ Mission Concrete 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)
Monier Lifetile Mission 'S'	9.1	1.38	1.08
Espana™ Mission Tile	9.79	1.42	1.03

Table 2: Aerodynamic Multipliers - $\lambda$ (ft <sup>3</sup> )		
Tile Profile	$\lambda$ (ft <sup>3</sup> ) Batten Application	$\lambda$ (ft <sup>3</sup> ) Direct Deck Application
Monier Lifetile Mission 'S' and Espana™ Mission Tile	0.262	0.284

Table 3: Restoring Moments due to Gravity - $M_g$ (ft-lbf)										
Tile Profile	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
Monier Lifetile Mission 'S', Espana™ Mission Tile	7.77	8.34	7.65	8.20	7.49	8.03	7.30	7.83	7.10	7.62

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)	Battens
Monier Lifetile Mission 'S', Espana™ Mission 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 Screws	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



<b>Table 5: Attachment Resistance Expressed as a Moment <math>M_r</math> (ft-lbf) for Two Patty Adhesive Set Systems</b>		
<b>Tile Profile</b>	<b>Tile Application</b>	<b>Minimum Attachment Resistance</b>
Monier Lifetile Mission 'S', España™ Mission Tile	Adhesive	29.3 <sup>2</sup>
1 See manufactures component approval for installation requirements.		
2 Flexible Products Company TileBond Average weight per patty 10.7 grams. Polyfoam Product, Inc. Average weight per patty 8 grams.		

<b>Table 5A: Attachment Resistance Expressed as a Moment - <math>M_r</math> (ft-lbf) for Single Patty Adhesive Set Systems</b>		
<b>Tile Profile</b>	<b>Tile Application</b>	<b>Minimum Attachment Resistance</b>
Monier Lifetile Mission 'S', España™ Mission Tile	Polyfoam PolyPro™	66.5 <sup>3</sup>
	Polyfoam PolyPro™	38.7 <sup>4</sup>
3 Large paddy placement of 63grams of PolyPro™.		
4 Medium paddy placement of 24grams of PolyPro™.		

<b>Table 5B: Attachment Resistance Expressed as a Moment - <math>M_r</math> (ft-lbf) for Mortar Set Systems</b>		
<b>Tile Profile</b>	<b>Tile Application</b>	<b>Attachment Resistance</b>
Monier Lifetile Mission 'S', España™ Mission Tile	Mortar Set <sup>1</sup>	24.5
5 Tile-Tite Roof Tile Mortar.		

## 5. LABELING

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

## 6. BUILDING PERMIT REQUIREMENTS

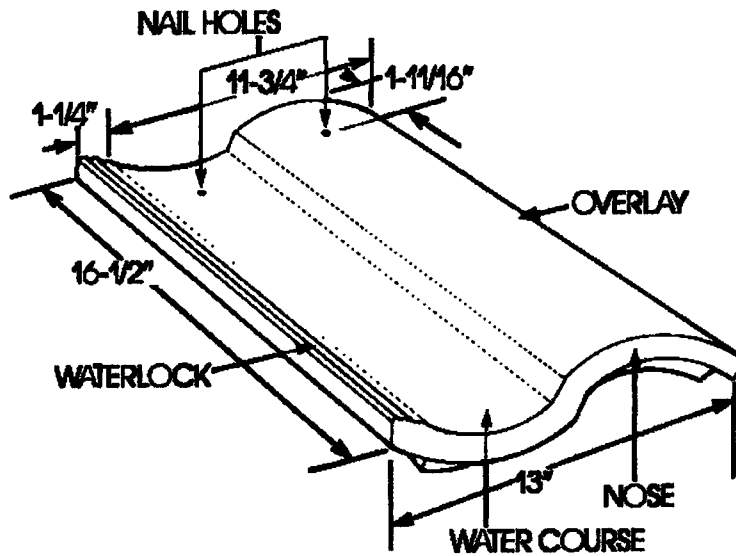
6.1 Application for building permit shall be accompanied by copies of the following:

6.1.1 This Notice of Acceptance.

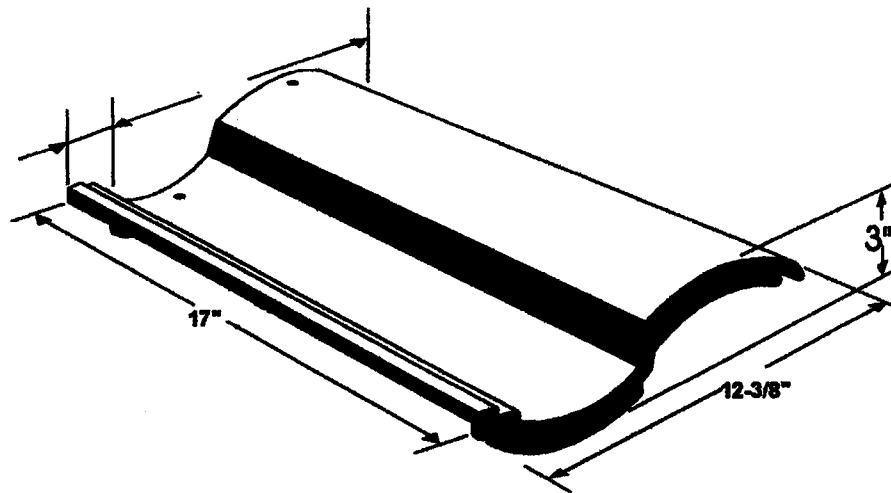
6.1.2 Any other documents required by the Building Official or applicable building code in order to properly evaluate the installation of this system.



## PROFILE DRAWINGS



**MONIER LIFETILE MISSION 'S' CONCRETE ROOF TILE**



**MONIER LIFETILE ESPANA™ MISSION CONCRETE ROOF TILE**

**END OF THIS ACCEPTANCE**



NOA No.: 02-1205.04  
 Expiration Date: 12/16/07  
 Approval Date: 01/02/03  
 Page 6 of 6



**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)**

**Polyfoam Products, Inc.  
11715 Boudreaux Road  
Tomball, TX 77375**

### **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 BCCO (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. BCCO reserves the right to revoke this acceptance, if it is determined by BCCO 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 High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION: Polypro® AH160**

**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 renews NOA No.01-0521.02 and consists of pages 1 through 7  
The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 06-0201.02  
Expiration Date: 05/10/11  
Approval Date: 04/13/06  
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## ROOFING ASSEMBLY APPROVAL:

**Category:** Roofing  
**Sub Category:** Roof tile adhesive  
**Materials:** Polyurethane

### SCOPE:

This approves Polypro® AH160 as manufactured by Polyfoam Products, Inc. as described in Section 2 of this Notice of Acceptance. For the locations where the design pressure requirements, as determined by applicable building code, does not exceed the design pressure values obtained by calculations in compliance with Roofing Application Standard RAS 127, for use with approved flat, low, and high profile roof tiles system using Polypro® AH 160. Where the attachment calculations are done as a moment based system for single patty placement, and as an uplift based system for double patty systems

### PRODUCTS MANUFACTURED BY APPLICANT:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Polypro® AH160	N/A	TAS 101	Two component polyurethane foam adhesive
Foampro® RTF1000	N/A		Dispensing Equipment
ProPack® 30 & 100	N/A		Dispensing Equipment

### PRODUCTS MANUFACTURED BY OTHERS:

Any Miami-Dade County Product Control Accepted Roof Tile Assembly having a current NOA which list moment resistance values with the use of Polypro AH160 roof tile adhesive.

### PHYSICAL PROPERTIES:

<u>Property</u>	<u>Test</u>	<u>Results</u>
Density	ASTM D 1622	1.6 lbs./ft. <sup>3</sup>
Compressive Strength	ASTM D 1621	18 PSI Parallel to rise 12 PSI Perpendicular to rise
Tensile Strength	ASTM D 1623	28 PSI Parallel to rise
Water Absorption	ASTM D 2127	0.08 Lbs./Ft <sup>2</sup>
Moisture Vapor Transmission	ASTM E 96	3.1 Perm / Inch
Dimensional Stability	ASTM D 2126	+0.07% Volume Change @ -40° F., 2 weeks +6.0% Volume Change @158°F., 100% Humidity, 2 weeks
Closed Cell Content	ASTM D 2856	86%

**Note:** The physical properties listed above are presented as typical average values as determined by accepted ASTM test methods and are subject to normal manufacturing variation.



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**EVIDENCE SUBMITTED:**

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
Center for Applied Engineering	#94-060	TAS 101	04/08/94
	257818-1PA	TAS 101	12/16/96
	25-7438-3	SSTD 11-93	10/25/95
	25-7438-4		
	25-7438-7	SSTD 11-93	11/02/95
	25-7492	SSTD 11-93	12/12/95
Miles Laboratories Polymers Division	NB-589-631	ASTM D 1623	02/01/94
Ramtech Laboratories, Inc.	9637-92	ASTM E 108	04/30/93
Southwest Research Institute	01-6743-011	ASTM E 108	11/16/94
	01-6739-062b[1]	ASTM E 84	01/16/95
Trinity Engineering	7050.02.96-1	TAS 114	03/14/96
Celotex Corp. Testing Services	528454-2-1	TAS 101	10/23/98
	528454-9-1		
	528454-10-1		
	520109-1	TAS 101	12/28/98
	520109-2		
	520109-3		
	520109-6		
	520109-7		
	520191-1	TAS 101	03/02/99
	520109-2-1		

**LIMITATIONS:**

1. Fire classification is not part of this acceptance. Refer to the Prepared Roof Tile Assembly for fire rating.
2. Polypro® AH160 shall solely be used with flat, low, & high tile profiles.
3. Minimum underlayment shall be in compliance with the Roofing Application Standard RAS 120.
4. Roof Tile manufactures acquiring acceptance for the use of Polypro® AH160 roof tile adhesive with their tile assemblies shall test in accordance with TAS 101.
5. Roof Tile manufactures acquiring acceptance for the use of HANDI-STICK roof tile adhesive with their tile assemblies shall test in accordance with TAS 101 with section 10.4 as modified herein.

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## INSTALLATION:

1. Polypro® AH160 may be used with any roof tile assembly having a current NOA that lists uplift resistance values with the use of Polypro® AH160.
2. Polypro® AH160 shall be applied in compliance with the Component Application section and the corresponding Placement Details noted herein. The roof tile assembly's adhesive attachment with the use of Polypro® AH160 shall provide sufficient attachment resistance, expressed as an uplift based system, to meet or exceed the uplift resistance determined in compliance with Miami-Dade County Roofing Application Standards RAS 127. The adhesive attachment data is noted in the roof tile assembly NOA
3. Polypro® AH160 roof tile adhesive and its components shall be installed in accordance with Roofing Application Standard RAS 120, and Polyfoam Products, Inc. Polypro® AH160 Operating Instruction and Maintenance Booklet.
4. Installation must be by a Factory Trained 'Qualified Applicator' approved and licensed by Polyfoam Products, Inc. Polyfoam Products Inc. shall supply a list of approved applicators to the authority having jurisdiction.
5. Calibration of the Foampro® dispensing equipment is required before application of any adhesive. The mix ratio between the "A" component and the "B" component shall be maintained between 1.0-1.15 (A): 1.0 (B). The dispense timer shall be set to deliver 0.0175 to 0.15 pounds per tile as determined at calibration. No other settings shall be approved.
6. Polypro® AH160 shall be applied with Foampro RTF1000 or ProPack® 30 & 100 dispensing equipment only.
7. Polypro® AH160 shall not be exposed permanently to sunlight.
8. Tiles must be adhered in freshly applied adhesive. Tile must be set within 2 to 3 minutes after Polypro® AH160 has been dispensed.
9. Polypro® AH160 placement and minimum patty weight shall be in accordance with the 'Placement Details' herein. Each generic tile profile requires the specific placement noted herein.

Table 1: Adhesive Placement For Each Generic Tile Profile			
Tile Profile	Placement Detail	Single Paddy Weight Min. (grams)	Two Paddy Weight per paddy Min. (grams)
Flat, Low, High Profiles	#1	35	N/A
High Profile (2 Piece Barrel)	#1	17/side on cap and 34/pan	N/A
Flat, Low, High Profiles	#2	24	N/A
Flat, Low, High Profiles	#3		8

## LABELING:

All Polypro® AH160 containers shall comply with the Standard Conditions listed herein.

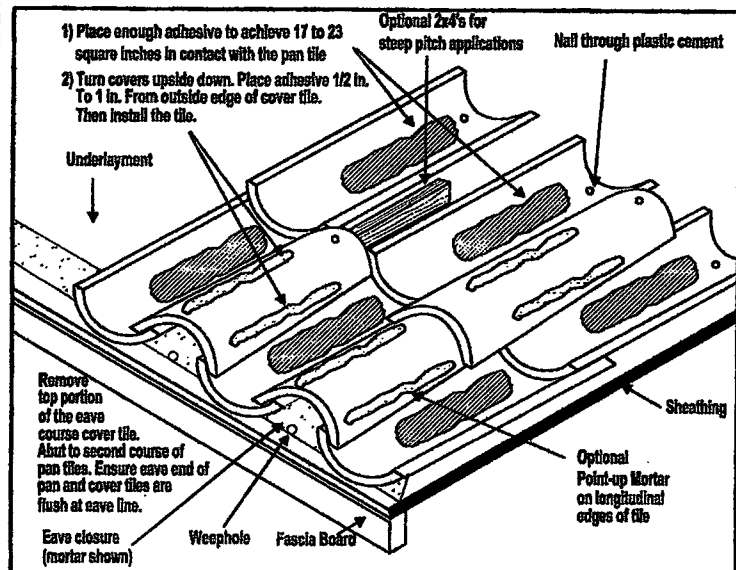
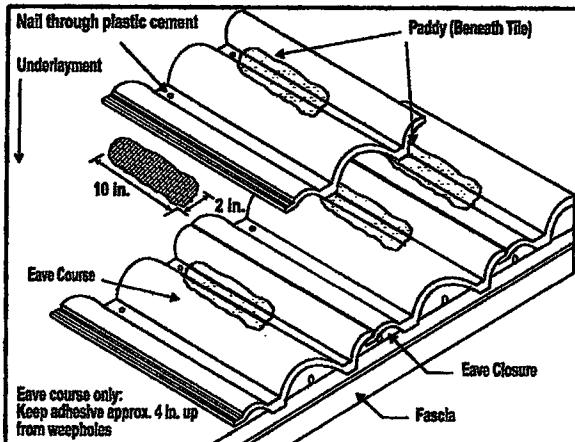
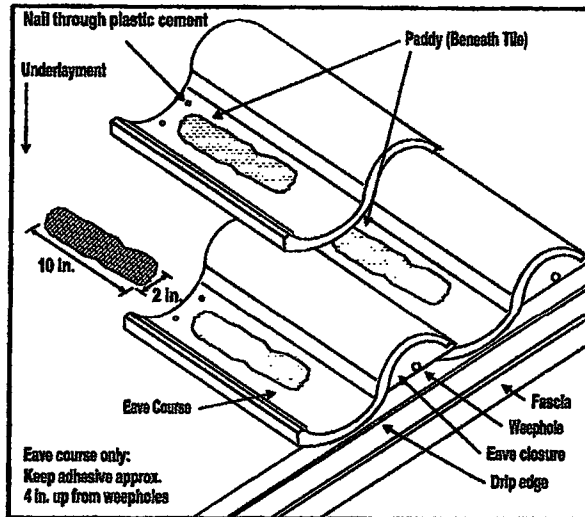
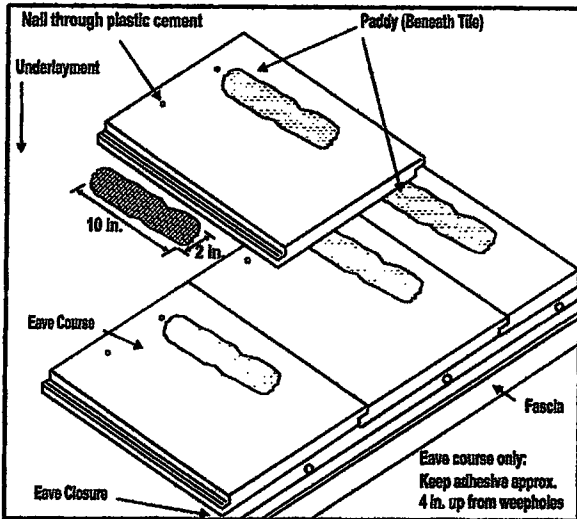
## BUILDING PERMIT REQUIREMENTS:

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



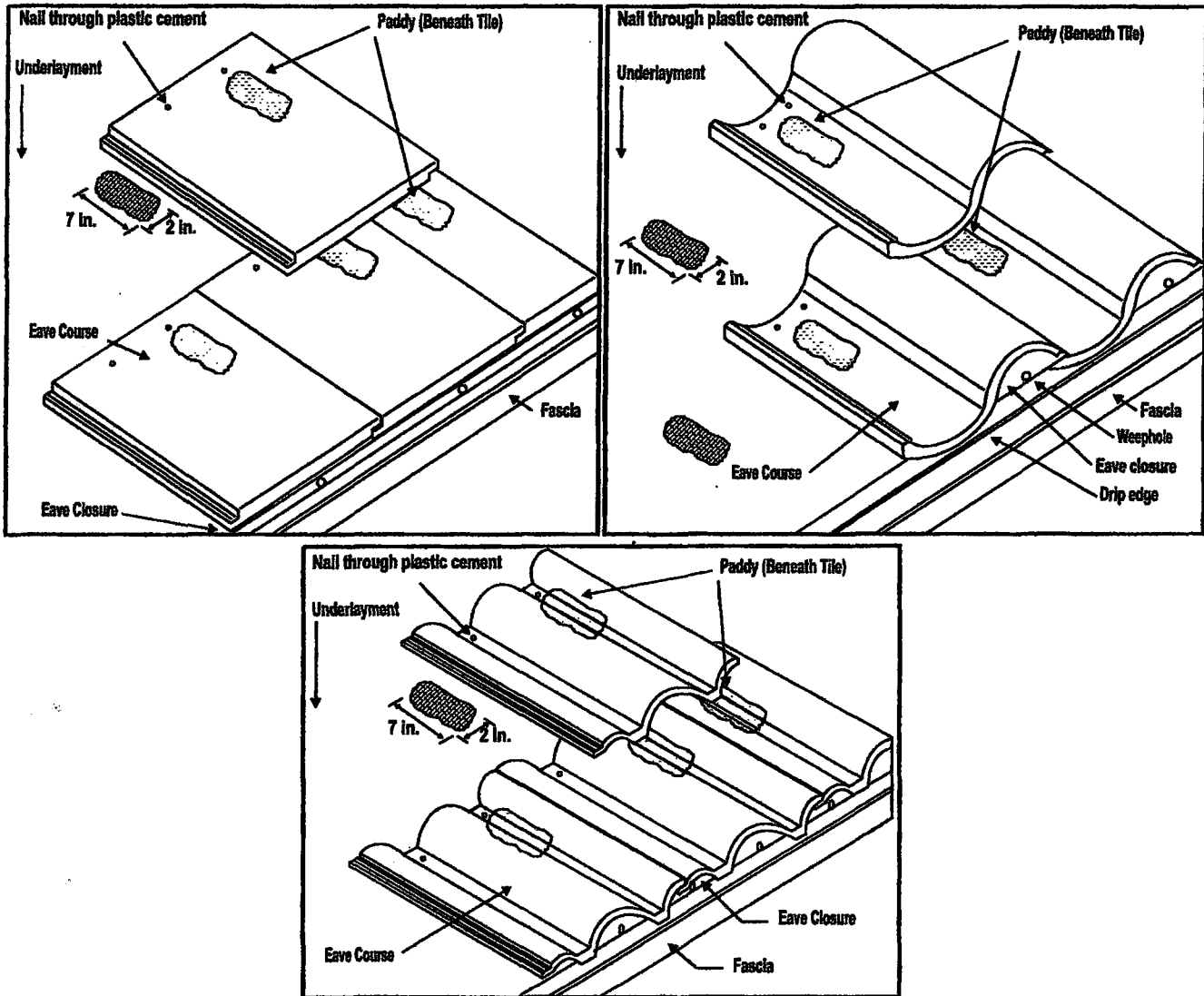
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# ADHESIVE PLACEMENT DETAIL 1 SINGLE PATTY

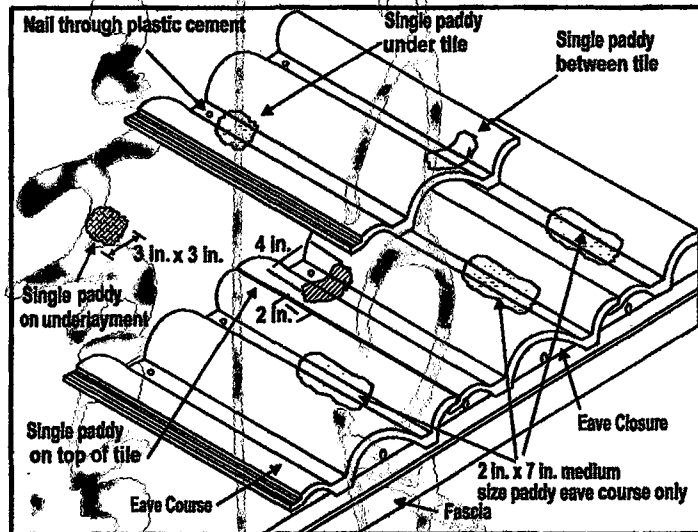
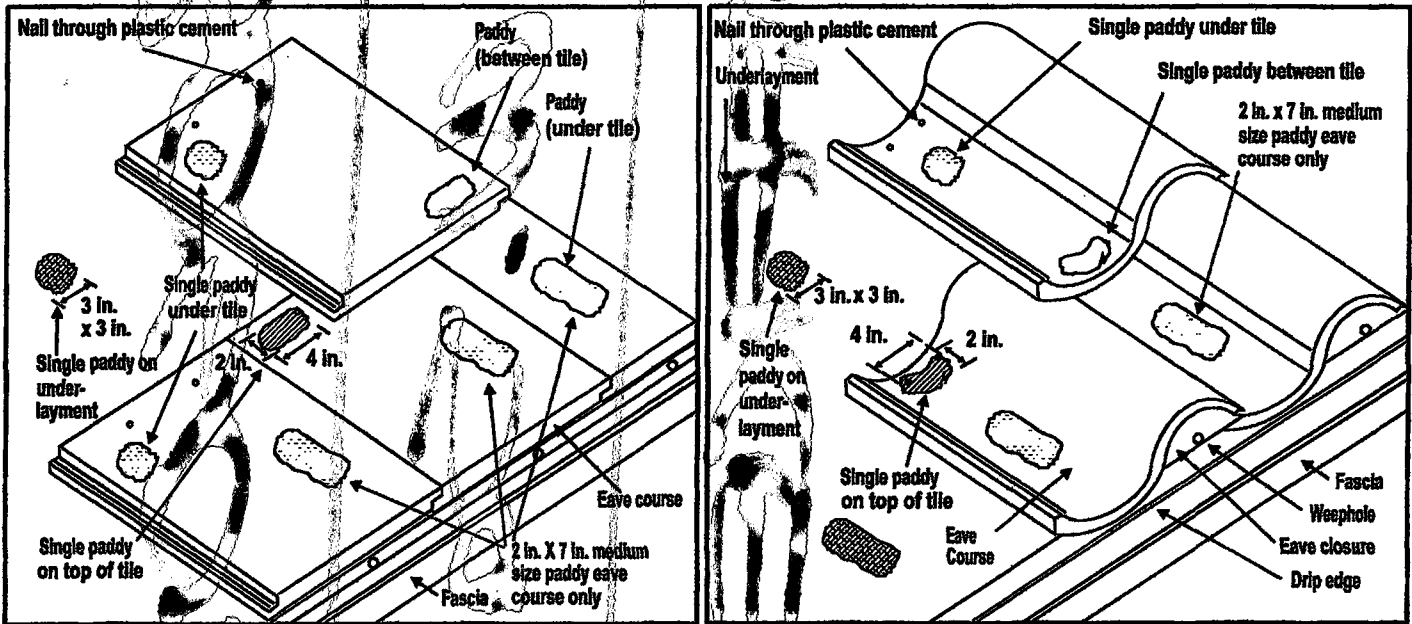




## ADHESIVE PLACEMENT DETAIL 2 SINGLE PATTY



# ADHESIVE PLACEMENT DETAIL 3 DOUBLE PATTY



END OF THIS ACCEPTANCE



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