



**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)**

**ES Products, Inc.  
280 Franklin St.  
Bristol, RI 02809**

**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).

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: ES Products, Inc.**

**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 consists of pages 1 through 11.

The submitted documentation was reviewed by Frank Zuloaga, RRC



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Expiration Date: 01/28/03  
Approval Date: 06/27/02  
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## ROOFING ASSEMBLY APPROVAL:

**Category:** Roofing Fasteners  
**Sub Categories:** Base Sheet, Insulation, Shingles

### 1. SCOPE

This approves ES Products, Inc. roofing fastener systems described in Section 3 of this Notice of Acceptance, designed to comply with the Florida Building Code.

### 2. PRODUCT DESCRIPTION

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
FM-30 Bearing Stress Plate	2.7" round stress plate	TAS 114 TAS 117	Steel bearing stress plate, coated with AZ-55 Galvalume or black urethane coating on both sides, for use with FM-45 and FM-60 fasteners for base ply attachment.
FM-45 Base Ply Fastener	1.2" head x 1.2" long	TAS 114 TAS 117	FM-45 base ply fasteners are formed from 0.013 in. thick G-90 hot dipped galvanized steel. The integral rib reinforced cap is coated on both sides with a black urethane coating. The stems are uncoated. For use in NVS concrete and various poured gypsum decks.
FM-60 Base Ply Fastener	1.2" head x 1.7" long	TAS 114 TAS 117	Formed from 0.013 in. thick G-90 hot dipped galvanized steel. The integral rib reinforced cap is coated on both sides with a black urethane coating. Stems are not coated. For use in cellular or aggregate lightweight concrete decks and various poured gypsum decks.
FM-75 Assembled Base Ply Fastener	2.7" head x 1.2" long	TAS 114 TAS 117	Formed from 0.013 in. thick G-90 hot dipped galvanized steel. The integral rib reinforced cap is coated on both sides with a black urethane coating. A 2.7 in. diameter disc formed from 0.013 AZ-55 Galvalume steel is factory assembled to each fastener. For use in cellular and aggregate lightweight concrete decks and various poured gypsum decks.



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FM-90 Assembled Base Ply Fastener	2.7" head x 1.7" long	TAS 114 TAS 117	Formed from 0.013 in. thick G-90 hot dipped galvanized steel. The integral rib reinforced cap is coated on both sides with a black urethane coating. A 2.7 in. diameter disc formed from 0.013 AZ-55 Galvalume steel is factory assembled to each fastener. For use in cellular and aggregate lightweight concrete decks and various poured gypsum decks.
Insuldeck Loc-Nail Assembled Base Ply Fastener	2.7" head x 1-7/8" long	TAS 114 TAS 117	Formed from .024" thick AZ-55 hot dipped Galvalume steel. A 2.7" diameter disk formed from .013" AZ-55 Galvalume steel is factory assembled to each fastener. For use in cementitious wood fiber decks.
Nail-Tite Type A	1.7" head x 1.5" long	TAS 114 TAS 117	Galvalume AZ-55 steel cap and G-90 galvanized shank. One piece fastener for use in new or existing gypsum decks.
Nail-Tite Type R	1.7" head x 1.0" long	TAS 114 TAS 117	Galvalume AZ-55 steel cap and G-90 galvanized shank. One piece fastener for use in existing gypsum decks.
Twin Loc-Nail	2.7" head x 1.8" long, 2.7" head x 2.8" long, 2.7" head x 3.8" long, 2.7" head x 4.8" long	TAS 114 TAS 117	Tube formed from .030" thick G-90 hot dipped galvanized steel. A 2.7" diameter disk formed from .018" AZ-55 Galvalume steel is factory assembled to each fastener. Locking staple formed from .080" coated steel is factory assembled into tube. For base sheet and insulation attachment to new or existing cementitious wood fiber, poured gypsum and lightweight concrete decks.
Do-All Loc-Nail	.435" head x 1.4" long .435" head x 1.8" long		One-piece stainless steel fasteners for shingle attachment to gypsum board, gypsum plank, plywood, wood, and composite decks.
Tin Tag	1.625" round stress plate With or without .235" diameter central hole		Steel bearing stress plate, coated with AZ-55 Galvalume or G-90 galvanized for use with roofing nails or Do-All Loc-Nails (w/.235" central hole) to attach underlayment or base sheet.



## 2.1 TYPICAL PROPERTIES

Note: A margin of safety of 2 has been applied to the listed test results.

Withdrawal Resistance Performance - TAS 117(A) - Static Load			
Fastener	Deck Type	Static Withdrawal Resistance (lbf)	
FM-45 & FM-75	Poured gypsum	30.0	
Nail-Tite Type A	Poured gypsum	69.4	
Nail-Tite Type R	Poured gypsum	67.3	
FM-60 & FM-90	Min. 200 psi cellular Lightweight concrete	3 day cure	28 day cure
		32.1	53.5
	Min. 200 psi aggregate lightweight concrete	3 day cure	28 day cure
		39.9	77.3
Insuldeck Loc-Nail	Cementitious wood fiber	31.8	
Twin Loc-Nail	Poured gypsum	262.7	
Twin Loc-Nail	Cementitious wood fiber	176.2	

Withdrawal Resistance Performance - TAS 117(A) - Pulsating Load		
Fastener	Deck Type	Static Withdrawal Resistance (lbf)
FM-45 & FM-75	Poured gypsum	25.8
Nail-Tite Type A	Poured gypsum	51.4
Nail-Tite Type R	Poured gypsum	37.2
FM-60 & FM-90	Min. 200 psi cellular lightweight concrete	28 day cure - 42.9
	Min. 200 psi aggregate lightweight concrete	28 day cure - 66.3
Insuldeck Loc-Nail	Cementitious wood fiber	20.8
Twin Loc-Nail	Poured gypsum	196.0
Twin Loc-Nail	Cementitious wood fiber	105.0

Base Sheet Rupture Performance, TAS 117(B): 2.7" FM-30 Plate (FM-45 with FM-30, FM-60 with FM-30, FM-75 or FM-90) or Insuldeck Loc-Nail					
Manuf.	Base Sheet	Rupture Value (lbf)	Manuf.	Base Sheet	Rupture Value (lbf)
Honeywell	Glass Fiber Base Sheet	84	Johns Manville	Glasbase	103
	Vented Base Sheet	85		Dynabase	104
Celotex	Channel Vent GB	95		Ventsulation	109
	Vaporbar GB	92	Siplast	Parabase	101
	Hydrostop	102		Parabase Plus	100
Firestone	MB Base	88	Soprema	Sopra-G	103
GAF	GAFGLAS #75	103		Elastophene 180	107



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	Stratavent	89		Sopralene 180	115
CertainTeed	Flex-I-Glas Base	106	Tamko	Nail Fast	99
	PolySMS	111		Versa Base	106
Koppers	Glass Fiber Base	108	Tremco	BURmastic Glass Ply	114
	Organic Base	94		BURmastic Composite Ply	114
Malarkey	#501	110	U.S. Intec	Ultra Base	95.0
	#602	107		Flex Base	111
	#603	114		Modified Base	111
	#605	109		Permavent	117
Nord	NBS G-2 Base	102	W.P Hickman	Multi Ply	112
	Nordstar Base	110		Performance Ply	113
				Pika Ply SS-2	116

Base Sheet Rupture Performance, TAS 117(B): 1.7" Head (Nail-Tite, Type A or R)					
Manuf.	Base Sheet	Rupture Value (lbf)	Manuf.	Base Sheet	Rupture Value (lbf)
Honeywell	Glass Fiber Base Sheet	60	Johns Mansville	Glasbase	45
	Vented Base Sheet	61		Dynabase	73
Celotex	Channel Vent GB	60		Ventsulation	78
	Vaporbar GB	61		PermaPly 28	56
Firestone	MB Base	59	SOPREMA	Sopra-G	63
GAF	GAFGLAS #75	49		Modified Sopra-G	52
	Stratavent	56	Tamko	Glass-Base	70
	Ruberoid Base	71		VaporChan	75
CertainTeed	Flex-I-Glas Base	77	Tremco	BURMastic Composite Ply	78
	PolySMS	79		BURMastic Glass Ply	61
Malarkey	#501	52	US Intec	Ultrabase	71
	#515	76		Flex Base 30	53
	#602	74		Modified Base Plus	75
	#603	79	WP Hickman	Multi-Ply Glass	71
	#605	78		Performance Ply	53



Base Sheet Rupture Performance, TAS 117(B): 2.7" Head					
Twin Loc-Nail					
Manuf.	Base Sheet	Rupture Value (lbs.)	Manuf.	Base Sheet	Rupture Value (lbs.)
Honeywell	Black Armor base Sheet	219.2	John Mansville	Dynabase	301.9
Bitec	Beta Base	240.0	John Mansville	Vestulation	227.7
CertainTeed	Glasbase	179.0	John Mansville	Perma Ply-28	275.4
Certainteed	Flex-I-Glas Base	240.2	Siplast	Parabase	217.4
CertainTeed	Flex-I-Glas All Weather Empire Base	249.0	Siplast	Parabase Plus	279.4
Firestone	MB Base	256.2	Soprema	Sopra-G	245.0
GAF	GAFGLAS Stratavent	237.9	Soprema	Modified Sopra-G	206.4
GAF	GAFGLAS Stratavent perforated	193.5	Tamko	Glass-Base	233.6
GAF	GAFGLAS #75	234.0	Tamko	Vapor-Chan	315.8
WP Hickman	Multiply glass	266.3	Tamko	Base-N-Ply	206.1
WP Hickman	Multiply glass CL	381.2			

### 3. APPROVED APPLICATIONS

**Tradename:** FM-45 Base Sheet Fastener

**Compatible Plate(s):** FM-30 Discs.

**Application:** See specific Roof Assembly Product Control Notice of Acceptance for fastener density and Approved attachment patterns.

**Deck:** Approved NVS lightweight concrete, various poured gypsums, and existing gypsum. See lightweight concrete deck Notice of Acceptance for Approved deck systems.

**Tradename:** FM-60 Base Sheet Fastener

**Compatible Plate(s):** FM-30 Discs.

**Application:** See specific Roof Assembly Product Control Notice of Acceptance for fastener density and Approved attachment patterns.

**Deck:** Approved minimum 200-psi aggregate or cellular lightweight concrete. See lightweight concrete deck Notice of Acceptance for Approved deck systems



**Tradename:** FM-75 Assembled Base Sheet Fastener

**Compatible Plate(s):** N/A

**Application:** FM-75 Base Ply Fastener is an approved and acceptable alternate to the Olympic Assembled CR 1.2" Base Sheet Fastener. FM-75 Base Ply Fasteners may be used in any approved Roof Assembly NOA where the Olympic Assembled CR 1.2" Base Sheet Fastener is referenced. Approved fastening patterns and densities listed in any approved Roof Assembly NOA containing the Olympic Assembled CR 1.2" Base Sheet Fastener shall be acceptable when using FM-75 Base Ply Fasteners.

**Deck:** Approved NVS lightweight concrete, various poured gypsums, existing gypsum. See lightweight concrete deck Notice of Acceptance for Approved deck systems

**Tradename:** FM-90 Assembled Base Sheet Fastener

**Compatible Plate(s):** N/A

**Application:** FM-90 Base Ply Fastener is an approved and acceptable alternate to the Olympic Assembled CR 1.7" Base Sheet Fastener. FM-90 Base Ply Fasteners may be used in any approved Roof Assembly NOA where the Olympic Assembled CR 1.7" Base Sheet Fastener is referenced. Approved fastening patterns and densities listed in any approved Roof Assembly NOA containing the Olympic Assembled CR 1.7" Base Sheet Fastener shall be acceptable when using FM-90 Base Ply Fasteners.

**Deck:** Approved minimum 200-psi aggregate or cellular lightweight concrete. See lightweight concrete deck Notice of Acceptance for Approved deck systems.

**Tradename:** Nail-Tite Type A

**Compatible Plate(s):** N/A

**Application:** See specific Roof Assembly Product Control Notice of Acceptance for fastener density and Approved attachment patterns.

**Deck:** New or existing gypsum.

**Tradename:** Nail-Tite Type R

**Compatible Plate(s):** N/A

**Application:** See specific Roof Assembly Product Control Notice of Acceptance for fastener density and Approved attachment patterns.

**Deck:** Existing gypsum



**Tradename:**           **Insuldeck Loc-Nail Assembled Base Sheet Fastener**

Compatible Plate(s): N/A

Application:           See specific Roof Assembly Product Control Notice of Acceptance for fastener density and Approved attachment patterns.

Deck:                   Cementitious Wood Fiber.

**Tradename:**           **Twin Loc-Nail Assembled Base Sheet/Insulation Fastener**

Compatible Plate(s): N/A

Application:           See specific Roof Assembly Product Control Notice of Acceptance for fastener density and Approved attachment patterns.

Deck:                   New or sound existing Cementitious Wood Fiber, Poured Gypsum, Lightweight Concrete.

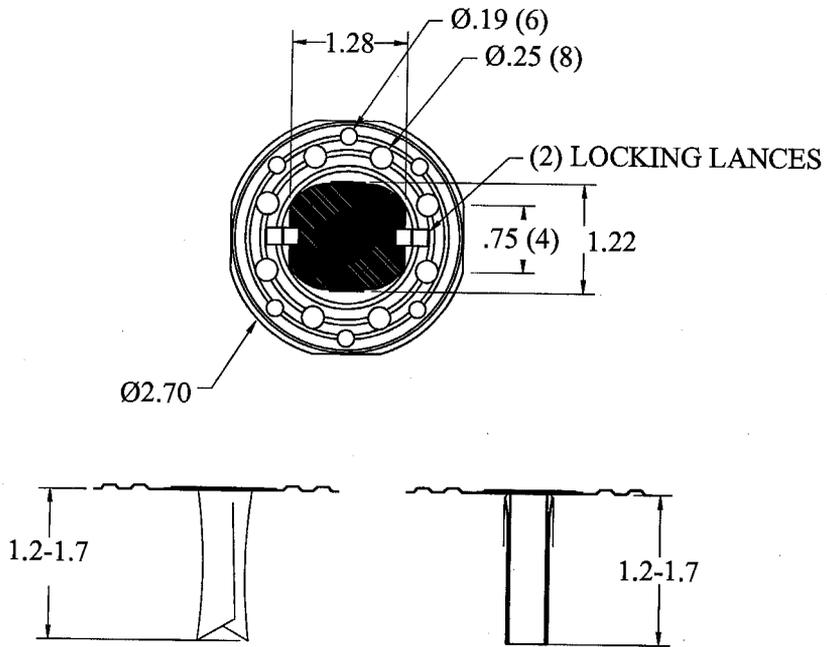
**Tradename:**           **Do-All Loc-Nail**

Compatible Plate(s): Tin Tab with .235" central hole.

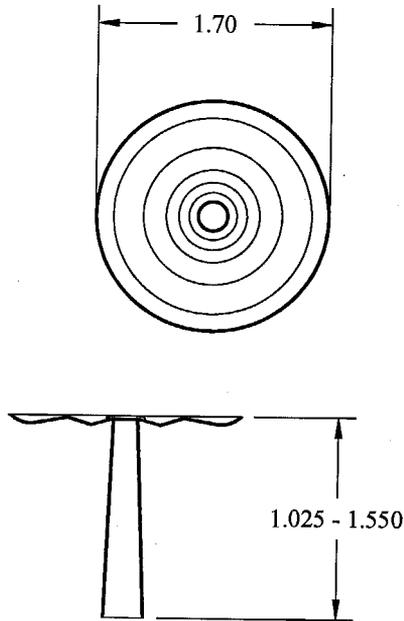
Application:           Shingle attachment (no plate), Base sheet/underlayment attachment (with plate).

Deck:                   Gypsum Board, Gypsum Plank, Plywood, Wood, and Composite Decks.



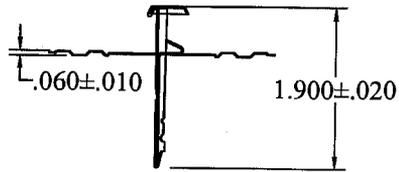
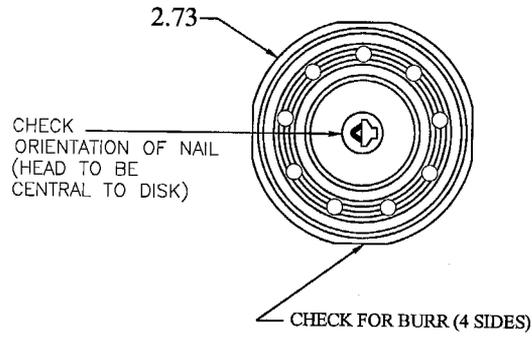


**FM BASE PLY FASTENERS**

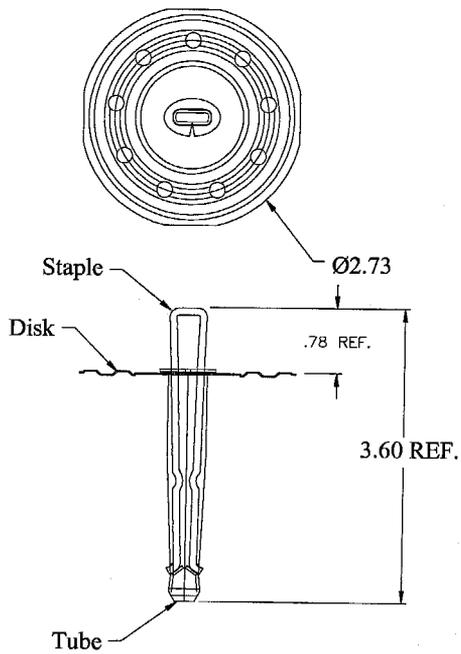


**NAIL-TITE**



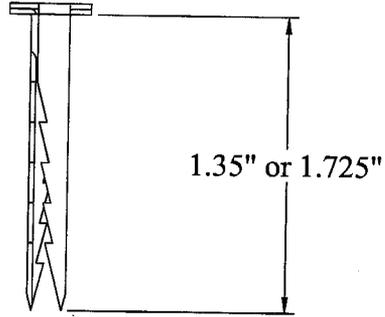
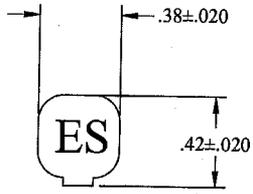


**INSULDECK LOC-NAIL**

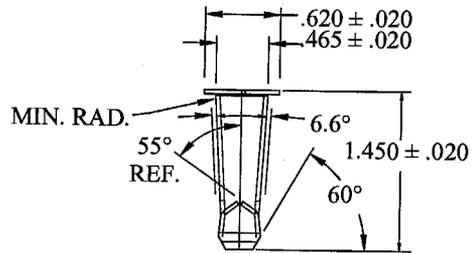
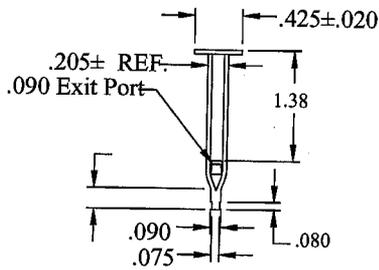
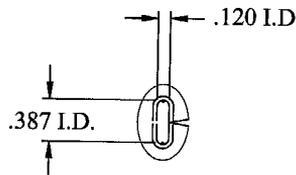


**TWIN LOC-NAIL ASSEMBLY**





**DO-ALL LOC-NAIL**



**1.4" TWIN LOC-NAIL SHANK**

**END OF THIS ACCEPTANCE**



**NOTICE OF ACCEPTANCE:EVIDENCE SUBMITTED**  
*(For File ONLY. Not part of NOA.)*

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
Factory Mutual Research Corporation	Wind Uplift	J.I. 0R0Q1.AM	03/22/91
Factory Mutual Research Corporation	Wind Uplift	J.I. 1V1A9.AM	07/12/91
Factory Mutual Research Corporation	Standard 4470	J.I. 0V8A3.AM	11/13/91
Factory Mutual Research Corporation	Standard 4470	J.I. 1V9A8.AM	02/25/92
Factory Mutual Research Corporation	Wind Uplift	J.I. 0W2A0.AM	03/19/92
Factory Mutual Research Corporation	Wind Uplift	J.I. 1W5A2.AM	10/05/92
Factory Mutual Research Corporation	Wind Uplift	J.I. 0W4A1.AM	01/04/93
Factory Mutual Research Corporation	Corrosion Resistance Testing of Loc-Nails	J.I. 0W4A1.AM	01/07/93
Factory Mutual Research Corporation	Standard 4470	J.I. 3W3A5.AM	01/27/94
Trinity Engineering, Inc.	Dynamic Pull Through TAS 117(B)	#4670.10.95-1	10/01/95
Exterior Research & Design, LLC.	TAS 117(A), (B) & (C)	#4670.07.97-1	07/20/97