



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

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

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DURO-LAST Roofing, Inc.
525 Morley Drive
Saginaw, MI 48601

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: DURO-LAST Single Ply PVC Roof Systems over Lightweight Concrete Decks

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 No. 12-0529.04 and consists of pages 1 through 15.
The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 14-0325.10
Expiration Date: 08/22/17
Approval Date: 04/16/15
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: PVC
Deck Type: Lightweight Concrete
Maximum Design Pressure: -232.5 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Duro-Last Membrane	.037" thick, fabricated in sheets up to 3000 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced roofing membrane.
Duro-Last Membrane	.045" thick, fabricated in sheets up to 2000 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced roofing membrane.
Duro-Last Membrane	.057" thick, fabricated in sheets up to 1800 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced roofing membrane.
Duro-Last Designer Series Membrane	.045" thick Various widths & lengths	ASTM D4434	PVC polymer blend polyester reinforced roofing membrane: Rock-Ply & Shingle-Ply.
Duro-Fleece Membrane	.047" thick, fabricated in sheets up to 2000 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced fleece backed roofing membrane.
Duro-Fleece Membrane	.056" thick, fabricated in sheets up to 1800 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced fleece backed roofing membrane.
Duro-Fleece Membrane	.080" thick, fabricated in sheets up to 1800 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced fleece backed roofing membrane.
Duro-Fleece Plus Membrane	.047" thick, fabricated in sheets up to 2000 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced fleece backed roofing membrane.
Duro-Fleece Plus Membrane	.056" thick, fabricated in sheets up to 2000 sq. ft.	ASTM D4434	PVC polymer blend polyester reinforced fleece backed roofing membrane.
Duro-Tuff Membrane	.045" thick Various widths x 100 ft rolls	ASTM D4434	PVC polymer blend polyester reinforced fleece backed roofing membrane.
Duro-Tuff Membrane	.056" thick Various widths x 100 ft rolls	ASTM D4434	PVC polymer blend polyester reinforced roofing membrane.
Duro-Tuff Membrane	.080" thick Various widths x 100 ft rolls	ASTM D4434	PVC polymer blend polyester reinforced roofing membrane.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Duro-Last Fascia Bar	1 3/4" x 10'; 4" x 10'	N/A	Extruded vinyl drip edge with holes punched 8" o.c.
Duro-Last Fascia Bar Cover	1 3/4" x 10'; 4" x 10'	N/A	Extruded decorative cover for Duro-Last Fascia Bar
Duro-Last Fascia	2" & 4"	TAS 111	Kynar finish Galvalume, 24 ga., cover
Duro-Last Snap Coping	12"	TAS 111	Kynar finish Galvalume, 24 ga., coping
Duro-Last 2-Piece Metal "T-Edge"	N/A	TAS 111	Kynar finish Galvalume, 24 ga., with vinyl skirt
Duro-Last 2-Piece Compression Edge	N/A	TAS 111	Kynar finish Galvalume, 24 ga.
Duro-Last Vinyl Coated Metal	4' x 10' .043" thick	G-90	G-90 galvanized steel, laminated with Duro-Last Vinyl Film.
Duro-Last Drip Edge	2" face x 10'; 4" face x 10';	N/A	Extruded vinyl drip edge with holes punched 8" o.c.
Duro-Last Two-Way Roof Vents		N/A	Injection molded two-way roof vents with a Duro-Last membrane skirt.
Duro-Last Gravel Stop	2" face x 10'; 4" face x 10';	N/A	Extruded vinyl gravel stop with holes punched 8" o.c.
Roof-Trak III Walk Pads	30" x 60" .125" thick	N/A	Extruded vinyl walk way pads manufactured from Duro-Last membrane.
Duro-Last WB II Adhesive	5 gal. pail	N/A	Polymeric waterborne membrane adhesive.
Duro-Last SB IV	5 gal. pail	N/A	Low VOC solvent-based membrane adhesive.
Duro-Fleece CR-20 Membrane Adhesive	40 lb. Cylinder A 35 lb. Cylinder B	Proprietary	Two-component membrane adhesive.
Duro-Grip CR-20 Adhesive	40 lbs. Cylinder A 35 lbs. Cylinder B	Proprietary	Dual component, low-rise polyurethane foam adhesive
Duro-Fleece Adhesive	Various	Proprietary	Two-component membrane adhesive.
Duro-Last Accessories	Various	ASTM D4434	Custom fabricated accessories for parapets and penetrations: Curb flashing, Inside & Outside Corner, Scuppers, Drain Boot, Parapet Flashing, Stack Flashing; all for use in the Duro-Last roofing systems.
Duro-Blue	4 mil x 20' x 360'; 4 mil x 20' x 100'	N/A	Separation slip sheet produced from coextruded polyethylene film.
Duro-Weave	2.5 mil x 12' x 328'	N/A	Separation slip sheet produced from high density polyethylene tapes and coated on one side with low density polyethylene.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam III, ACFoam IV	Polyisocyanurate foam insulation.	Atlas Roofing Corp
ENRGY-3	Polyisocyanurate foam insulation.	Johns Manville
DensDeck	Silicon treated gypsum.	Georgia-Pacific Gypsum LLC
ISO 95+ GL	Polyisocyanurate foam insulation.	Firestone Building Products Company LLC
Multi-Max FA-3	Polyisocyanurate foam insulation.	Rmax Operating, LLC
H-Shield	Polyisocyanurate foam insulation.	Hunter Panels, LLC
H-Shield CG	Polyisocyanurate foam core laminated to a coated fiberglass facer.	Hunter Panels, LLC
Duro-Guard Iso II-H, and Tapered	Polyisocyanurate foam insulation	Duro-Last Roofing, Inc.
Duro-Guard Iso III-H, and Tapered	Polyisocyanurate foam core laminated to a coated fiberglass facer.	Duro-Last Roofing, Inc.
Duro-Guard Iso III-A, and Tapered Duro-Guard Iso IV-A, and Tapered	Polyisocyanurate foam core laminated to a coated fiberglass facer.	Duro-Last Roofing, Inc.
SECUROCK Gypsum-Fiber Roof Board	Fiber reinforced insulation board	USG Corporation

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Twin Loc-Nails	Preassembled fastener/plate unit.	Various	Trufast



EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>	
Factory Mutual Research Corporation	3Y5A6.AM	Class 4470	03-10-95	
	2M4A8 .AM	Class 4470	03-05-87	
	3Y5A6.AM	Class 4470	03-10-95	
	1X2A7 .AM	Class 4470	08-90-99	
	3005604	Class 4470	03-13-00	
	3008342	Class 4470	10-19-00	
	3040741	Class 4470	10-17-11	
	3032172	Class 4470	06-12-09	
	3023458	Class 4470	07-18-06	
	3050118	Class 4470	01-20-14	
Exterior Research & Design, LLC	02732.09.04	ASTM D4434	09-28-04	
Trinity ERD	02750.02.08-R2	ASTM D4434	08-03-12	
	D42390.10.12	FM 4474 / TAS 114	10-03-12	
	D35210.08.11-R1	ASTM D4434	09-17-12	
	D40280.03.13	ASTM D4434	03-13-13	
	D40260.03.13.1	ASTM D4434	03-29-13	
	D44450.05.13-2	ASTM D4434	05-10-13	
	D35210.08.11.R3	ASTM D4434	03-25-13	
Intertek Testing Services, NA Inc.	3119586-001	TAS 111	07-10-07	
PRI Construction Materials Technologies, LLC	DLRI-018-02-01	FM 4474/TAS 114	09-27-12	
	DLRI-021-02-01.6	ASTM D1761/D1876	11-18-14	
		TAS 117-B		
	DLRI-053-02-01	ASTM D4434	06-26-14	
	DLRI-063-02-01	TAS 114(D)	07-06-14	



APPROVED ASSEMBLIES:

Membrane Type: Single Ply, PVC

Deck Type 4I: Lightweight Concrete Decks, Insulated

Deck Description: Minimum 300 psi compressive strength, minimum 3” thick, minimum 39 pcf wet cast density Mearlcrete Lightweight Insulation Concrete cast over concrete. Optional minimum 1” EPS board encapsulated within lightweight concrete.

System Type A(1): All Layers of Insulation adhered with approved adhesive; membrane fully adhered to insulation.

Deck: Structural Concrete

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam IV, Duro-Guard Iso IV-A Minimum 2” thick	N/A	N/A
Multi-Max FA-3 Minimum 1.5” thick	N/A	N/A
ACFoam III, , Duro-Guard Iso III-A, , Minimum 1.3” thick	N/A	N/A
ISO 95+ GL, ENRGY-3, JM ISO 3, , H-Shield, H-Shield CG, Duro-Guard Iso II-H, Duro-Guard Iso III-H Minimum 1” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Layers of insulation shall be adhered with Duro-Grip CR-20 Adhesive in ribbons, 1.5 in. wide, spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Duro-Last membrane fully adhered to the insulation layer with Duro-Last WB II Adhesive applied at a rate of 0.7 gal/sq. Laps are sealed with a minimum 1.5” wide heat weld.
Or
Duro-Fleece Plus membrane adhered with Duro-Last WB II Adhesive at a minimum rate of 1.0 gal/sq. Laps are sealed with a minimum 1.5” wide heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #9)



Membrane Type: Single Ply, PVC

Deck Type 4I: Lightweight Concrete Decks, Insulated

Deck Description: Minimum 300 psi compressive strength, minimum 3” thick, minimum 44.4 pcf wet cast density Range II Elastizell Lightweight Insulation Concrete cast over concrete. Optional minimum 1” EPS board encapsulated within lightweight concrete.

System Type A(2): All Layers of Insulation adhered with approved adhesive; membrane fully adhered to insulation.

Deck: Structural Concrete

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam IV, Duro-Guard Iso IV-A Minimum 2” thick	N/A	N/A
Multi-Max FA-3 Minimum 1.5” thick	N/A	N/A
ACFoam III, , Duro-Guard Iso III-A, Minimum 1.3” thick	N/A	N/A
ISO 95+ GL, ENRGY-3, JM ISO 3, H-Shield, H-Shield CG, Duro-Guard Iso II-H, Duro-Guard Iso III-H Minimum 1” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Layers of insulation shall be adhered with Duro-Grip CR-20 Adhesive in ribbons, 1.5 in. wide, spaced 12 in. o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Duro-Last membrane fully adhered with Duro-Last WB II Adhesive at a minimum rate of 0.7 gal/sq. Laps are sealed with a minimum 1.5” wide heat weld.
Or
Duro-Fleece Plus membrane fully adhered with Duro-Last WB II Adhesive at a minimum rate of 1.0 gal/sq. Laps are sealed with a minimum 1.5” wide heat weld.

Maximum Design Pressure: -127.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete Decks, Non-Insulated

Deck Description: Elastizell cellular lightweight concrete cast with Zell-Fibers in the mix, wet cast density of 46-50 pcf, minimum 350 psi compressive strength. Slurry coat, followed by 1” thick EPS Holey Board placed into the wet concrete, followed by a minimum 2” thick top coat of Elastizell cellular lightweight concrete.

System Type E: Anchor sheet mechanically fastened to LWC deck subsequent membrane adhered.

Deck: 22 ga, type B, Grade 33, vented steel deck attached to supports at 7 ft spans using ITW Buildex Traxx/5 fastners spaced 6” o.c. (each flue). Side laps attached with Buildex Traxx/1 fasteners spaced 20” o.c..

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Anchor Sheet: JM PermaPly 28 or GAFGLAS #75 base sheet mechanically fastened to the deck as described below:

Fastening: Anchor sheet attached to deck with Twin Loc-Nails spacing of 7.5” o.c. at the 3” side laps and 7.5” o.c. in two equally spaced staggered center rows.

Membrane: Duro-Fleece Plus membrane fully adhered with Duro-Fleece CR-20 Adhesive applied using a splatter pattern at a rate of 7 lbs./square. Laps are sealed with a minimum 1.5” wide heat weld.

Maximum Design Pressure: -67.5 psf. (See General Limitation #7)



Membrane Type: Single Ply, PVC
Deck Type 4: Lightweight Concrete Decks, Non-Insulated
Deck Description: Elastizell cellular lightweight concrete cast with Zell-Fibers in the mix, wet cast density of 46-50 pcf, minimum 350 psi compressive strength. Slurry coat, followed by 1" thick EPS Holey Board placed into the wet concrete, followed by a minimum 2" thick top coat of Elastizell cellular lightweight concrete
System Type F(1): Membrane adhered to LWC deck.
Deck: 22 ga, Type B, Grade 33, vented steel deck attached to supports at 7 ft spans using ITW Buildex Traxx/5 fastners spaced 6" o.c. (each flue). Side laps attached with Buildex Traxx/1 fasteners spaced 20" o.c.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: Duro-Fleece Plus membrane fully adhered with Duro-Fleece CR 20 Adhesive applied using a splatter pattern (as specified in Duro-Last's CR 20 data sheet) at a rate of 7 lbs./square. Laps are sealed with a minimum 1.5" wide heat weld.
Or
Duro-Last membrane fully adhered with Duro-Last SB IV applied at a rate of 60 ft²/gal or Duro-Last WB II Adhesive applied at 140 ft²/gallon.

Maximum Design Pressure: -52.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete Decks, Non-Insulated

Deck Description: Minimum 300 psi compressive strength with minimum 36 pcf wet cast density 1/8" thick slurry of Celcore MF Cellular concrete with Celcore HS Rheology Modifying Admixture is poured over the steel deck. Min 1" thick Insulfoam Holey Board is placed into the wet concrete, followed by a minimum 2" thick, 45.6 pcf wet cast density, top coat of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture. After allowing to cure, Celcore PVA Curing Compound is spray applied at a minimum rate of 0.33 gal/sq.

System Type F(2): Membrane fully adhered to LWC deck.

Deck: 22 ga, type B, Grade 33, vented steel deck attached to supports at 4 ft spans using ITW Buildex Traxx/5 fasteners spaced 6" o.c. (each flue). Side laps attached with Buildex Traxx/1 fasteners spaced 24" o.c. (three evenly spaced fasteners between supports).

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: Duro-Fleece Plus membrane (min. 0.057") fully adhered with Duro-Last WB II Adhesive applied at 100 ft²/gallon. Laps are sealed with a minimum 1.5 in. heat weld. Laps are sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -60 psf. (See General Limitation #9)



Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete Decks, Non-Insulated

Deck Description: Minimum 300 psi compressive strength with minimum 45.6 pcf wet cast density 0.5" thick slurry of Celcore MF Cellular concrete with Celcore HS Rheology Modifying Admixture is poured over the concrete deck. Min 1" thick Insulfoam Holey Board is placed into the wet concrete, followed by a minimum 2" thick top coat of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture. After allowing to cure, Celcore PVA Curing Compound is spray applied at a minimum rate of 0.33 gal/sq.

System Type F(3): Membrane fully adhered to LWC deck.

Deck: Structural Concrete

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: Duro-Fleece Plus membrane fully adhered with Duro-Last WB II Adhesive applied at 100 ft²/gallon. Laps are sealed with a minimum 1.5 in. heat weld.

Maximum Design Pressure: -82.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete Decks, Non-Insulated

Deck Description: Minimum 300 psi compressive strength with minimum 45.6 pcf wet cast density; 0.5" thick slurry of Celcore MF Cellular concrete with Celcore HS Rheology Modifying Admixture is poured over the concrete deck. Min 1" thick Insulfoam Holey Board is placed into the wet concrete, followed by a minimum 2" thick top coat of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture. After allowing to cure, Celcore PVA Curing Compound is spray applied at a minimum rate of 0.33 gal/sq.

System Type F(4): Membrane fully adhered to LWC deck.

Deck: Structural Concrete

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: Duro-Fleece Plus membrane (min. 0.057") fully adhered with Duro-Fleece CR 20 Adhesive applied in continuous 1 in. wide ribbons spaced 4 in. o.c. allowed to expand to full coverage prior to applying the membrane. Laps are sealed with a minimum 1.5" wide heat weld.

Maximum Design Pressure: -232.5 psf. (See General Limitation #9)



Membrane Type: Single Ply, PVC

Deck Type 4: Lightweight Concrete Decks, Non-Insulated

Deck Description: Minimum 340 psi; 1/8" thick slurry of Celcore MF Cellular concrete with Celcore HS Rheology Modifying Admixture is poured over the steel deck. Min 1" thick EPS is placed into the wet concrete, followed by a minimum 2" thick top coat of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture. After allowing to cure, Celcore PVA Curing Compound is spray applied at a minimum rate of 300 ft²/gal.

System Type F(5): Membrane adhered to LWC deck.

Deck: 22 ga, type B, Grade 33, vented steel deck attached to supports at 5 ft spans using 5/8" puddle welds (each flute). Side laps attached with #1/4 -14 x 7/8" HWH SD fasteners with 1/2" washers spaced 15" o.c.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: Duro-Fleece Plus membrane fully adhered with Duro-Fleece CR-20 Adhesive applied in "splatter pattern" (as specified in Duro-Last's CR-20 data sheet) at a rate of 8 lbs./100 ft². Laps are sealed with a minimum 2 in. heat weld.

Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: Single Ply, PVC
Deck Type 4: Lightweight Concrete Decks, Non-Insulated
Deck Description: Minimum 273 psi compressive strength Elastizell cellular lightweight concrete cast with Zell-Crete Fibers. Optional minimum 1” thick EPS may be encapsulated into the lightweight concrete.
System Type F(6): Membrane adhered to LWC deck.
Deck: Structural concrete

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Membrane: Duro-Last membrane fully adhered with laps sealed with a minimum 1.5 in. heat weld and using one of the following adhesives:

Option #1: Duro-Last SB IV applied at a rate of 60 ft²/gal.
(Maximum Design Pressure -90 psf. General Limitation #9)

Option #2: Duro-Last WB II Adhesive applied at 140 ft²/gallon.
(Maximum Design Pressure -75 psf. General Limitation #9)

Maximum Design Pressure: See adhesive options above



LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For Systems where specific lightweight insulating concrete is referenced consult current lightweight insulating concrete NOA for specific deck construction and limitations. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. 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.

END OF THIS ACCEPTANCE



NOA No.: 14-0325.10
Expiration Date: 08/22/17
Approval Date: 04/16/15
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