MIAMI-DADE COUNTY
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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Danosa Caribbean, Inc.
P.O. Box 13757
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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: Danosa Modified Roofing Systems Over Concrete Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city and state of manufacturing facility, 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 renews and revises NOA No. 09-0224.02 and consists of pages 1 through 11.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials:	SBS
Deck Type	Concrete
Maximum Design Pressure	-422.5 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Glasdan RM-4	33.5' x 39"	ASTM D6163	A fiberglass reinforced modified bitumen membrane with a granule surfacing used as a cap sheet in a two ply system.
Esterdan RM-4	33.5' x 39"	ASTM D6164	A polyester reinforced modified bitumen membrane with a granule surfacing used as a cap sheet in a two ply system.
Glasdan R-36	33.5' x 39"	ASTM D6163	A fiberglass reinforced modified bitumen membrane with a smooth surfacing used as a base sheet in a two ply system.
Esterdan R-36	33.5' x 39"	ASTM D6164	A polyester reinforced modified bitumen membrane with a smooth surfacing used as a base sheet in a two ply system.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam II	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ACFoam III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
DensDeck Prime	Gypsum insulation board	Georgia-Pacific Gypsum LLC
SECUROCK Gypsum-Fiber Roof Board	Fiber reinforced coverboard	United States Gypsum Corporation

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast 12	Insulation fastener for wood, steel and concrete decks	# 12 x 8" max. length	SFS Intec Inc.
2.	#12 Standard Roofgrip	Insulation fastener for wood, steel and concrete decks	# 12 x 8" max. length	OMG, Inc.
3.	Dekfast Galvalume Steel Hex	Galvalume hex stress plate.	$2^7/_8$" x 3¼"	SFS Intec Inc.
4.	3 in. Round Metal Plate	Round galvalume steel stress plate.	3" round	OMG, Inc.
5.	ASAP RoofGrip Pre-Assembled System	Pre-assembled OMG XHD fasteners with OMG Super XHD Barbed Plates	#15 x 16" max. Length, with 2 ¾" round	OMG, Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Name/Report	Report No.	Date
Factory Mutual Research Corporation	4470	3018690	04/07/06
	4470	3031362	05/23/08
	4470	3023353	02/25/05
Underwriters Laboratory	UL790	TGFU.R9069	01/16/14
PRI Asphalt Technologies	ASTM D6163	DNSC-003-02-01	11/19/08
	ASTM D6164	DNSC-002-02-01	12/15/08
	ASTM D6164	DNSC-004-02-01	11/19/18
	ASTM D6163	DNSC-001-02-01	12/15/08

APPROVED ASSEMBLIES:

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B: Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, AC Foam III Minimum 1.5" thick	**1 or 2**	**1:1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Prime Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be fully adhered with Olympic OlyBond Adhesive applied at a rate of 1 gal./100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet:	One ply of Glasdan R-36 fully adhered to the coverboard with Karnak #81 Modified Bitumen Adhesive squeegee applied at a rate of 1.5 gal./100 ft^2. with a minimum 3½" wide side lap.
Ply Sheet:	None.
Membrane:	One ply of Glasdan RM-4 fully adhered to the base sheet with Karnak #81 Modified Bitumen Adhesive squeegee applied at a rate of 1.5 gal./100 ft^2. with a minimum 3½" wide side lap torched.
Surfacing:	None.
Maximum Design Pressure:	-60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(1): All insulation is loosed laid with preliminary attachment to deck. Base sheet is subsequently mechanically fastened through insulation to the roof deck.

All General and System limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield, ACFoam II, AC Foam III Minimum 2" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to installation of the base sheet, at an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density. See Roofing Application Standard RAS 117 for fastening details.

Base Sheet: One ply of Esterdan R-36 mechanically fastened through the insulation layer to the deck as described below:

Fastening: Attach base sheet using OMG Super XHD 2¾" Barbed Stress Plates and OMG XHD fasteners spaced 6" o.c. in the minimum 5½" wide side lap which are spaced 34". The side lap is sealed with Henry No. 903 or Karnak #81 Modified Bitumen Adhesive trowel applied to both lap surfaces.

Ply Sheet: None.

Membrane: One ply of Glasdan RM-4 torch applied as per manufacturer's specifications or adhered with a full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./sq. with a minimum 3½" wide side lap.

Surfacing: None.

Maximum Design Pressure: -60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(2): All insulation is loosed laid with preliminary attachment to deck. Base sheet is subsequently mechanically fastened through insulation to the roof deck.

All General and System limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield, ACFoam II, AC Foam III Minimum 2" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. See Roofing Application Standard RAS 117 for fastening details.

Base Sheet: One ply of Esterdan R-36 mechanically fastened through the insulation layer to the deck as described below:

Fastening: Attach base sheet using OMG Super XHD 2¾" Barbed Stress Plates and OMG XHD fasteners spaced 6" o.c. in the minimum 6" wide side lap which are spaced 33.4". The Stress plates are primed with ASTM D41 primer. The side lap is torched as per manufacturer's specifications.

Ply Sheet: None.

Membrane: One ply of Glasdan RM-4 torch applied as per manufacturer's specifications or adhered with a full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.with a minimum 3½" wide side lap .

Surfacing: None.

Maximum Design Pressure: -82.5 psf. (See General limitation #7.)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(3): All insulation is loosed laid with preliminary attachment to deck. Base sheet is subsequently mechanically fastened through insulation to the roof deck.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield, ACFoam II, AC Foam III Minimum 2" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. See Roofing Application Standard RAS 117 for fastening details.

Base Sheet: One ply of Esterdan R-36 mechanically fastened through the insulation layer to the deck as described below:

Fastening: Attach base sheet using OMG Super XHD 2¾" Barbed Stress Plates and OMG XHD fasteners spaced 6" o.c. in the minimum 6" wide side lap which are spaced 33.4". The Stress plates are primed with ASTM D41 primer. The side lap is torched as per manufacturer's specifications.

Ply Sheet: None.

Membrane: One ply of Glasdan RM-4 torch applied as per manufacturer's specifications or adhered with a full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.with a minimum 3½" wide side lap .

Surfacing: None.

Maximum Design Pressure: -127.5 psf. (See General limitation #7.)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D(4): All insulation is loosed laid with preliminary attachment to deck. Base sheet is subsequently mechanically fastened through insulation to the roof deck.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield, ACFoam II, AC Foam III Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. See Roofing Application Standard RAS 117 for fastening details.

Base Sheet: One ply of Esterdan R-36 mechanically fastened through the insulation layer to the deck as described below:

Fastening: Attach base sheet using OMG Super XHD 2¾" Barbed Stress Plates and OMG XHD fasteners spaced 6" o.c. in the minimum 5½" wide side lap which are spaced 34" and two rows staggered in the middle of the base sheet spaced 12" o.c. The side lap is torched as per manufacturer's specifications.

Ply Sheet: One ply of Glasdan R-36 torch applied as per manufacturer's specifications or adhered with a full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./sq. to the base sheet with a minimum 3½" wide side lap .

Membrane: One ply of Glasdan RM-4 torch applied as per manufacturer's specifications or adhered with a full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.with a minimum 3½" wide side lap .

Surfacing: None.

Maximum Design Pressure: -165 psf. (See General limitation #7.)

Membrane Type:	SBS
Deck Type 3I:	Concrete Decks, Non-Insulated
Deck Description:	2500 psi structural concrete or concrete plank
System Type F(1):	Base sheet adhered with approved adhesive.

All General and System Limitations shall apply.

Base Sheet:	One ply of Glasdan R-36 fully adhered to the deck with Karnak #81 Modified Bitumen Adhesive squeegee applied at a rate of 1.5 gal./100 ft^2. with a minimum 3½" wide side lap.
Ply Sheet:	None.
Membrane:	One ply of Glasdan RM-4 fully adhered to the base sheet with Karnak #81 Modified Bitumen Adhesive squeegee applied at a rate of 1.5 gal./100 ft^2. with a minimum 3½" wide side lap.
Surfacing:	None.
Maximum Design Pressure:	-422.5 psf. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 3I:	Concrete Decks, Non-Insulated
Deck Description:	2500 psi structural concrete or concrete plank
System Type F(2):	Base sheet adhered with approved adhesive.

All General and System Limitations shall apply.

Base Sheet:	One ply of Glasdan R-36 fully adhered to the deck with Henry #903 Modified Bitumen Adhesive squeegee applied at a rate of 1.5 gal./100 ft^2. with a minimum 3½" wide side lap.
Ply Sheet:	None.
Membrane:	One ply of Glasdan RM-4 fully adhered to the base sheet with Henry #903 Modified Bitumen Adhesive squeegee applied at a rate of 1.5 gal./100 ft^2. with a minimum 3½" wide side lap.
Surfacing:	None.
Maximum Design Pressure:	-362.5 psf. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 3I:	Concrete Decks, Non-Insulated
Deck Description:	2500 psi structural concrete or concrete plank
System Type F(3):	Base sheet and Membrane torch applied to deck.

All General and System Limitations shall apply.

Base Sheet:	One ply of Glasdan R-36 torch applied as per manufacturer's specifications with a minimum 3½" wide side lap to the deck.
Ply Sheet:	None.
Membrane:	One ply of Glasdan RM-4 torch applied as per manufacturer's specifications with a minimum 3½" wide side lap.
Surfacing:	None.
Maximum Design Pressure:	-352.5 psf. (See General Limitation #9.)

CONCRETE DECK 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; calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

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 side lap 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 Professional Engineer, Registered 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. 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 to 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