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)

Tremco Inc.
3735 Green Road
Beachwood, OH 44122

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: Tremco Built-Up-Roof over Steel 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 consists of pages 1 through 23.
The submitted documentation was reviewed by Frank Zuloaga, RRC

ROOFING ASSEMBLY APPROVAL

Category:	Membrane Roofing System
Sub-Category:	Built-Up Roofing
Sub-Type:	Fiberglass
Deck Type:	Steel
Maximum Design Pressures:	**-107.5 psf**
Maximum Fire Classification	See General Limitation #1

TABLE 1
TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT

Product	Dimensions	Test Specification	Product Description
BURMastic® Base Sheet Adhesive or Solvent Free Base Sheet Adhesive	5 gallon	Proprietary	Cold process adhesive used for adhering BURMastic Glass Ply or Composite Ply to Approved Insulations
BURMastic® Adhesive	5 or 55 gallon	Proprietary	Cold applied ply sheet and surfacing adhesive
BURMastic® Composite Ply	36" x 66.6'	ASTM D 4601 Type II	Type II asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing
BURMastic® FR		Proprietary	Cold applied, fire rated flood coat
BURMastic® Glass Ply	36" x 72'	ASTM D 4601 Type II	Asphalt coated, fiberglass reinforced base/ply sheet.
BURMastic® Glass Ply 28#	36" x 108'	ASTM D 4601 Type II	Asphalt coated, fiberglass reinforced base/ply sheet.
Double-Duty Aluminum™	5 gallon	ASTM D 2824	Aluminum pigmented roof coating.
Fas-n-Free® Adhesive		Proprietary	One part, solvent free adhesive used for adhering Approved insulations to Approved substrates
High Build Reflective Coatings	5 and 55 gallon	Proprietary	High solids, water-based, elastomeric coating.
One-Coat Aluminum	5 and 55 gallon	ASTM D2824, Type III	Asphalt based, fibered aluminum roof coating.
Polarcote FR®	5 and 55 gallon	Proprietary	Fire retardant, acrylic/polymer blend emulsion
Improved Polarcote®	5 and 55 gallon	Proprietary	Reflective, white elastomeric roof coating
Poly-THERM® Roofing Ply	10 squares per roll 39¾" wide	Proprietary	Continuous filament, spunbonded polyester ply sheet for use in conventional and modified bitumen built-up roof systems
POWERply Modified Hot Melt Adhesive	60 lb. Keg	Proprietary	Polymer modified hot melt adhesive.systems
Premium III™	100 lb.	ASTM D 312	Type III asphalt for use in built-up roofing systems
Premium IV™	100 lb.	ASTM D 312	Type IV asphalt for use in built-up roofing systems
THERMastic® Adhesive	60 lb.	Proprietary	All purpose roof cement

Product	Dimensions	Test Specification	Product Description
THERMglass® Type IV	3’ x 180’	ASTM D 2178 Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roof systems
THERMglass® Type VI	3’ x 180’	ASTM D 2178 Type VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roof systems
Tremlastic	5 and 55 gallon	Proprietary	Polymer modified asphalt emulsion.
Tremlastic S	5 and 55 gallon	Proprietary	Non-fibered, polymer modified asphalt emulsion.
TREMprime™ Q.D.	1, 5 or 55 gallon	ASTM D 41	Asphalt based roofing primer
Therm MB FR	100 sq. ft./roll	ASTM D 5147	Modified bitumen, glass reinforced, fire resistant membrane
Therm™ 100	System		Tremco built-up roofing system using Thermastic and Thermglass
Therm™ 200	System		Tremco built-up roofing system using Polytherm and Thermastic
Tremprime® WB	5 gallon	Proprietary	Water based roofing primer

TABLE 2

APPROVED INSULATIONS:

Product	Dimensions	Test Specification	Product Description	Manufacturer
Pyrox	Various	PA 110	Polyisocyanurate foam insulation	Apache Products Co. (With current NOA)
ACFoam I, ACFoam II	various	PA 110	Polyisocyanurate foam insulation	Atlas Energy Products (with current NOA)
Iso 95+	various	PA 110	Polyisocyanurate foam insulation	Firestone Bld. Pro. Co. (with current NOA)
High Density Wood Fiberboard	various	PA 110	Wood fiber insulation board	Generic (with current NOA)
Perlite Insulation	various	PA 110	Perlite insulation board	Generic (with current NOA)
Dens Deck	various	PA 110	Water resistant gypsum board	Georgia Pacific (with current NOA)
Ultra/M-II ISO/glas	various	PA 110	Polyisocyanurate foam insulation	Homasote Co. (with current NOA)

E'NRG'Y-2, E'NRG'Y-2 Plus, PSI-25	various	PA 110	Polyisocyanurate foam insulation	Johns Manville Corp. (with current NOA)
Fiber Glass	various	PA 110	Glass fiber board	Johns Manville Corp. (with current NOA)
ISORoc	Various	PA 110	Polyisocyanurate and rockwool composite insulation	Johns Manville (With current NOA)
UltraGard Gold	Various	PA 110	Polyisocyanurate foam insulation	Johns Manville (With current NOA)
Multi-Max	Various	PA 110	Polyisocyanurate foam insulation	R-Max (With current NOA)

TABLE 3

APPROVED FASTENERS:

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #12, #14 & #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc.
2.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	Construction Fasteners Inc.
3.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	Construction Fasteners Inc.
4.	#12 Roofgrip Fasteners	Insulation fastener for wood and steel.		ITW Buildex Corp.
5.	Hextra Plus	Pre-assembled Insulation fastener and plate		ITW Buildex Corp.
6.	Metal Plate	Galvalume stress plate.	3” round 3” square	ITW Buildex Corp.
7.	Gearlok Plastic Plate	Polypropylene round plate	3.2"	ITW Buildex Corp.
8.	UltraFast	Insulation fastener for wood and steel.		Johns Manville
9.	Glasfast Plate	Red polypropylene copolymer round plate	3” round	Johns Manville
10.	Olympic Fastener #12 & #14	Insulation fastener		Olympic Manufacturing Group, Inc.
11.	Olympic Fastener ASAP	Pre-assembled Insulation fastener and plate		Olympic Manufacturing Group, Inc.
12.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	Olympic Manufacturing Group, Inc.

TABLE 3

APPROVED FASTENERS:

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
13.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	Olympic Manufacturing Group, Inc.
14.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Manufacturing Group, Inc.
15.	Rawl #12 & #14	Insulation fastener for steel and wood decks		Powers Fasteners, Inc.
16.	Rawl Plate	3" round galvalume AZ50 steel plate	3" round	Powers Fasteners, Inc.
17.	Insul-Fixx Fastener	Insulation fastener for steel and wood decks		SFS Stadler, Inc.
18.	Insul-Fixx S Plate	3" round galvalume AZ50 steel plate	3" round	SFS Stadler, Inc.
19.	Insul-Fixx P Plate	3" round polyethylene stress plate	3" round	SFS Stadler, Inc.
20.	Tru-Fast	Insulation fastener for steel and wood decks		The Tru-Fast Corp.
21.	Tru-Fast Plates	3" round galvalume AZ55 steel plate	3" round	The Tru-Fast Corp.
22.	Tru-Fast Plates	Polyethylene plastic plate	3" round	The Tru-Fast Corp.
23.	Tremco #14	Insulation fastener		Tremco, Inc.
24.	Tremco Plastic Plates	Polypropylene plastic plate	3.25" round	Tremco, Inc.
25.	Tremco Metal Plates	3" round galvalume AZ50 steel plate	3" round	Tremco, Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Applied Research Laboratories	27076	physical properties	
Factory Mutual Research Corporation	J.I. #2Y5A2.AM	Wind Uplift Classification	11/16/94
Factory Mutual Research Corporation	J.I. #0Z8A3.AM	Wind Uplift Classification	06/13/95
Factory Mutual Research Corporation	J.I. #2Y9A5.AM	Class 4470	11/13/95
Factory Mutual Research Corporation	J.I. #2D1A8.AM	Class 4470	07/27/2000
Factory Mutual Research Corporation	J.I. #0D0A9.AM	Class 4470	08/01/2000
Factory Mutual Research Corporation	2001 FMRC	Insulation and fastener requirements	1/01/01
Underwriters Laboratories, Inc.	R4170	Fire Classification	1/01/95
Exterior Research & Design, LLC.	4544.07.96-1	Wind Uplift PA 114	07/30/96
PRI Asphalt Technologies, Inc.	TRE-15-02-01	Physical Properties	05/25/99
IRT of S. Florida	00012	PA 114	08/03/2000

APPROVED ASSEMBLIES:

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type B(1): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt or 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 **Minimum 1.3" thick**	**1, 4, 10, 15 or 17**	**1:2 ft^2**
E'NRG'Y-2 **Minimum 1.4" thick**	**1, 4, 5, 10, 15 or 20**	**1:3 ft^2**
ISORoc **Minimum 1.4" thick**	**1, 4, 5, 10, 15 or 20**	**1:2.67 ft^2**
E'NRG'Y-2 Plus **Minimum 1.5" thick**	**1, 4, 5, 10, 15, 17 or 20**	**1:3 ft^2**
Apache Pyrox **Minimum 1.3" thick**	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:2.7 ft^2**
UltraGard Gold **Minimum 1.3" thick**	**1, 4, 5, 10, 15, 17 or 20**	**1:2.67 ft^2**
Iso 95 + **Minimum 1.4" thick**	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:4 ft^2**
Perlite **Minimum ¾" thick**	**1 or 10**	**1:2 ft^2**
Fiberglas **Minimum $^{15}/_{16}$" thick**	**1, 4, 5, 8, 10, 17 or 20**	**1:2.67 ft^2**
High Density Wood Fiber **Minimum ½" thick**	**1, 4, 5, 10, or 20**	**1:4 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
Any of the insulations listed for Base Layer, above.	**N/A**	**N/A**

Note: Apply optional top layer of insulation in a full mopping of approved hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Fas-n-Free Insulation Adhesive applied in ribbons at a coverage rate of 1.5 gallons per square or 2.0 gallons per square for Fiberglas Roof Insulation. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.

Base Sheet: (Optional) One ply BURmastic Composite Ply, BURmastic Glass Ply, BURmastic Glass Ply28#, or approved G2 fiberglass base sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, or type III asphalt.

Ply Sheet: Three or more plies of THERMglass Type IV, Type VI, PolyTHERM or approved Type IV or Type VI ply sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV or Type III asphalt at a rate of 30 to 35 lb/sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, Type III asphalt or BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

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

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type B(2): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt or 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 **Minimum 1.3" thick**	**1, 4, 10, 15 or 17**	**1:4 ft^2**
E'NRG'Y-2 **Minimum 1.4" thick**	**1, 4, 5, 10, 15 or 20**	**1:3 ft^2**
ISORoc **Minimum 1.4" thick**	**1, 4, 5, 10, 15 or 20**	**1:2.67 ft^2**
E'NRG'Y-2 Plus **Minimum 1.5" thick**	**1, 4, 5, 10, 15, 17 or 20**	**1:3 ft^2**
Apache Pyrox **Minimum 1.3" thick**	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:2.7 ft^2**
UltraGard Gold **Minimum 1.3" thick**	**1, 4, 5, 10, 15, 17 or 20**	**1:2.67 ft^2**
Iso 95 + **Minimum 1.4" thick**	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:4 ft^2**
Perlite **Minimum ¾" thick**	**1 or 10**	**1:2 ft^2**
Fiberglas **Minimum $^{15}/_{16}$" thick**	**1, 4, 5, 8, 10, 17 or 20**	**1:2.67 ft^2**
High Density Wood Fiber **Minimum ½" thick**	**1, 4, 5, 10, or 20**	**1:4 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
Any of the insulations listed for Base Layer, above.	**N/A**	**N/A**

Note: Apply optional top layer of insulation in a full mopping of approved hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Fas-n-Free Insulation Adhesive applied in ribbons at a coverage rate of 1.5 gallons per square or 2.0 gallons per square for Fiberglas Roof Insulation. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.

Base Sheet: (Optional) BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or Approved G2 fiberglass base sheet adhered to the substrate with BURmastic Adhesive at 2.5-3 gal./sq.

Ply Sheet: Two or more plies of BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or approved G2 fiberglass base/ply sheet adhered in BURmastic adhesive at a rate of 2.5-3 gal./sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

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

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type B(3): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt or 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**
Any approved polyisocyanurate Minimum 2" thick	**23**	**1:2 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**
High Density Wood Fiber Minimum ½" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of approved hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Fas-n-Free Insulation Adhesive applied in ½" to ¾" wide ribbons at a coverage rate of 1.5 gal./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.

Base Sheet: (Optional) One ply BURmastic Composite Ply, BURmastic Glass Ply, BURmastic Glass Ply28#, or approved G2 fiberglass base sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, or type III asphalt.

Ply Sheet: Three or more plies of THERMglass Type IV, Type VI, PolyTHERM or approved Type IV or Type VI ply sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV or Type III asphalt at a rate of 30 to 35 lb/sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, Type III asphalt or BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

Maximum Design Pressure: **-82.5 psf;** (See General Limitation #7)

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type B(4): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt or 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**
Any approved polyisocyanurate Minimum 2" thick	**23**	**1:2 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**
High Density Wood Fiber Minimum ½" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of approved hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Fas-n-Free Insulation Adhesive applied in ½" to ¾" wide ribbons at a coverage rate of 1.5 gal./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.

Base Sheet: (Optional) BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or Approved G2 fiberglass base sheet adhered to the substrate with BURmastic Adhesive at 2.5-3 gal./sq.

Ply Sheet: Two or more plies of BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or approved G2 fiberglass base/ply sheet adhered in BURmastic adhesive at a rate of 2.5-3 gal./sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

Maximum Design Pressure: **-82.5 psf;** (See General Limitation #7)

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type B(5): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt or 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**
AC-Foam II, E'NRG'Y-2, Isoroc or Multi-Max Minimum 1.5" thick	**17**	**1:1.3 ft^2**
E'NRG'Y-2 Plus Minimum 1.5" thick	**17**	**1:1.3 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**
High Density Wood Fiber Minimum ½" thick	**N/A**	**N/A**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**

Note: Apply optional top layer of insulation in a full mopping of approved hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Fas-n-Free Insulation Adhesive applied in ribbons at a coverage rate of 1.5 gallons per square or 2.0 gallons per square for Fiberglas Roof Insulation. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.

Base Sheet: (Optional) One ply BURmastic Composite Ply, BURmastic Glass Ply, BURmastic Glass Ply28#, or approved G2 fiberglass base sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, or type III asphalt.

Ply Sheet: Three or more plies of THERMglass Type IV, Type VI, PolyTHERM or approved Type IV or Type VI ply sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV or Type III asphalt at a rate of 30 to 35 lb/sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, Type III asphalt or BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

Maximum Design Pressure:

-72.5 psf - with asphalt applied Fiberboard top insulation layer over base layer
-100.0 psf - with asphalt applied Dens Deck top insulation layer over base layer
-107.5 psf - with mechanically attached E'NRG'Y-2 Plus base layer only
(See General Limitation #9)

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type B(6): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt or 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**
AC-Foam II, E'NRG'Y-2, Isoroc or Multi-Max Minimum 1.5" thick	**17**	**1:1.3 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**
High Density Wood Fiber Minimum ½" thick	**N/A**	**N/A**
Dens Deck Minimum ¼" thick	**N/A**	**N/A**

Note: Apply optional top layer of insulation in a full mopping of approved hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Fas-n-Free Insulation Adhesive applied in ribbons at a coverage rate of 1.5 gallons per square or 2.0 gallons per square for Fiberglas Roof Insulation. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer 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 face down.

Base Sheet: (Optional) BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or Approved G2 fiberglass base sheet adhered to the substrate with BURmastic Adhesive at 2.5-3 gal./sq.

Ply Sheet: Two or more plies of BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or approved G2 fiberglass base/ply sheet adhered in BURmastic adhesive at a rate of 2.5-3 gal./sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

Maximum Design Pressure:

-72.5 psf - with asphalt applied Fiberboard top insulation layer over base layer (See General Limitation #9)

-100.0 psf - with asphalt applied Dens Deck top insulation layer over base layer (See General Limitation #9)

-107.5 psf - with mechanically attached E'NRG'Y-2 Plus base layer only (See General Limitation #9)

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type C(1): All layers of insulation simultaneously fastened.

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
AC-Foam II, E'NRG'Y-2, E'NRG'Y-2 Plus Minimum 1.3" thick	**N/A**	**N/A**
ISORoc Minimum 1.5" thick	**N/A**	**N/A**
Multi-Max Minimum 1.4" thick	**N/A**	**N/A**
High Density Wood Fiber Minimum ½" thick	**N/A**	**N/A**
Perlite Minimum ¾" thick	**N/A**	**N/A**
Fiberglas Minimum $^{15}/_{16}$" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously attached; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II Minimum 1.3" thick	**1, 4, 10, 15 or 17**	**1:4 ft^2**
E'NRG'Y-2 Minimum 1.4" thick	**1, 4, 5, 10, 15 or 20**	**1:3 ft^2**
ISORoc Minimum 1.4" thick	**1, 4, 5, 10, 15 or 20**	**1:2.67 ft^2**
E'NRG'Y-2 Plus Minimum 1.5" thick	**1, 4, 5, 10, 15, 17 or 20**	**1:3 ft^2**
Apache Pyrox Minimum 1.3" thick	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:2.7 ft^2**
UltraGard Gold Minimum 1.3" thick	**1, 4, 5, 10, 15, 17 or 20**	**1:2.67 ft^2**
Iso 95 + Minimum 1.4" thick	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:4 ft^2**

Perlite		
Minimum ¾" thick	**1 or 10**	**1:2 ft²**
Fiberglas		
Minimum $^{15}/_{16}$" thick	**1, 4, 5, 8, 10, 17 or 20**	**1:2.67 ft²**
High Density Wood Fiber		
Minimum ½" thick	**1, 4, 5, 10, or 20**	**1:4 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: (Optional) One ply BURmastic Composite Ply, BURmastic Glass Ply, BURmastic Glass Ply28#, or approved G2 fiberglass base sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, or type III asphalt.

Ply Sheet: Three or more plies of THERMglass Type IV, Type VI, PolyTHERM or approved Type IV or Type VI ply sheet adhered to substrate with THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV or Type III asphalt at a rate of 30 to 35 lb/sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of THERMastic, POWERply Modified Hot Melt, Premium III, Premium IV, Type III asphalt or BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

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

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type C(2): All layers of insulation simultaneously fastened.

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
AC-Foam II, E'NRG'Y-2, E'NRG'Y-2 Plus Minimum 1.3" thick	**N/A**	**N/A**
ISORoc Minimum 1.5" thick	**N/A**	**N/A**
Multi-Max Minimum 1.4" thick	**N/A**	**N/A**
High Density Wood Fiber Minimum ½" thick	**N/A**	**N/A**
Perlite Minimum ¾" thick	**N/A**	**N/A**
Fiberglas Minimum $^{15}/_{16}$" thick	**N/A**	**N/A**

Note: All layers shall be simultaneously attached; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II Minimum 1.3" thick	**1, 4, 10, 15 or 17**	**1:4 ft^2**
E'NRG'Y-2 Minimum 1.4" thick	**1, 4, 5, 10, 15 or 20**	**1:3 ft^2**
ISORoc Minimum 1.4" thick	**1, 4, 5, 10, 15 or 20**	**1:2.67 ft^2**
E'NRG'Y-2 Plus Minimum 1.5" thick	**1, 4, 5, 10, 15, 17 or 20**	**1:3 ft^2**
Apache Pyrox Minimum 1.3" thick	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:2.7 ft^2**
UltraGard Gold Minimum 1.3" thick	**1, 4, 5, 10, 15, 17 or 20**	**1:2.67 ft^2**
Iso 95 + Minimum 1.4" thick	**1, 4, 5, 8, 10, 15, 17 or 20**	**1:4 ft^2**

Perlite		
Minimum ¾" thick	**1 or 10**	**1:2 ft²**
Fiberglas		
Minimum $^{15}/_{16}$" thick	**1, 4, 5, 8, 10, 17 or 20**	**1:2.67 ft²**
High Density Wood Fiber		
Minimum ½" thick	**1, 4, 5, 10, or 20**	**1:4 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: (Optional) BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or Approved G2 fiberglass base sheet adhered to the substrate with BURmastic Adhesive at 2.5-3 gal./sq.

Ply Sheet: Two or more plies of BURmastic Composite Ply, Burmastic Glass Ply, Burmastic Glass Ply 28# or approved G2 fiberglass base/ply sheet adhered in BURmastic adhesive at a rate of 2.5-3 gal./sq.

Surfacing: Install one of the following:

1. Gravel (400 lbs/sq.) or slag (300 lbs/sq.) in a flood coat of BURMastic Adhesive at a rate of 5-6.5 gal./sq. or Tremlastic or Tremlastic S at a rate of 4-5 gal./sq.
2. Tremlastic or Tremlastic S at a rate of 4-5 gal./sq. followed by:
   A. Double Duty Aluminum at rate of ¾ gal./sq.
   B. Two coats of Polarcote FR at a rate of 1 gal./sq. per coat.
   C. One coat Aluminum at a rate of 2-2.5 gal./sq.
   D. Minimum 60 lbs #11 granules into wet Tremlastic.
3. High Build Reflective Coating at a rate of 4 gal./sq.
4. One Coat Aluminum at a rate of 2-2.5 gal./sq.

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

STEEL 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 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.
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.

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 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 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.)**

END OF THIS ACCEPTANCE