



BUILDING CODE COMPLIANCE OFFICE
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PRODUCT CONTROL DIVISION
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PRODUCT CONTROL NOTICE OF ACCEPTANCE

Tremco, Inc.
3735 Green Road
Beachwood ,OH 44122

Your application for Notice of Acceptance (NOA) of:

Tremco Modified Bitumen Roofing Systems Over Lightweight Insulating Concrete Decks

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 01-0515.04
EXPIRES: 07/12/2006

Raul Rodriguez
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 07/12/2001

ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category: SBS Modified Bitumen

Approval Date: July 12, 2001

Expiration Date: July 12, 2006

Deck Type: Lightweight Concrete
Maximum Design Pressure -45 psf
Fire Classification: See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
BURMastic ® Base Ply	10 squares/roll, 39 3/4" wide	ASTM D 2178	
BURMastic ® Base Sheet Adhesive	5 gallon container	Proprietary	Cold process adhesive used for adhering BURMastic Glass Ply or Composite Ply to approved insulations.
BURmastic Adhesive	5 or 55 gallon containers or 375 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, Proprietary	Asphalt impregnated polyester/glass/polyester composite for use in conventional and modified bitumen built-up roofing.
Double Duty Aluminum™	5 gallon containers	ASTM D 2824	Aluminum pigmented roof coating.
Fas-n-Free Adhesive	System	Proprietary	One part, solvent free adhesive used for adhering approved insulations to approved substrates.
FireKote ®	5 and 55 gallons containers	Proprietary	Fire retardent acrylic/polymer blend emulsion.
Improved Polarcote ®	5 and 55 gallon containers	Proprietary	Reflective, white elastomeric roof coating.



Frank Zuloaga, RRC
 Roofing Product Control Examiner

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Poly-THERM ® Roofing Ply	10 squares per roll, 39 ¾" wide	Proprietary	Continuous filament, spunbonded polyester ply sheet for use in conventional and modified bitumen built-up roof systems.
Premium III ™	100 lb. Cartons	ASTM D 312	Type III asphalt for use in built-up roofing systems.
THERMastic ® Adhesive	60 lb. Containers	Proprietary	All purpose roofing cement.
THERMglass ®		ASTM D 2178 VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built up roofing.
TREMprime ™ Q.D.	1,5 or 55 gallon containers	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	ASTM D 2178 Type IV	Tremco built-up roofing systems using Thermastic and Thermglass.
Therm ™ MB 2C60	1 sq./roll	ASTM D5147	Modified bitumen ply sheet used as a membrane in modified bitumen roof systems.
Therm ™ MB 3G25	1 sq./roll	ASTM D 5147	Modified bitumen ply sheet used as a membrane in modified bitumen roof systems.
Tremlastic		PA 121	Roof coating.
Tremprime ® WB	5 gallon container	Proprietary	Water based roofing primer.
Weatherbuster		PA 121	Roof emulsion.

EVIDENCE SUBMITTED:

<u>Test agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
Factory Mutual Research Corporation	1994 FMRC	Current Insulation Fastening Requirements	01/01/94
	J.I. 0M7A7.AM	Wind Uplift and Fire Classification	05/14/87
Underwriters Laboratories, Inc.	R6692	Fire Classification Compliance	01/01/94



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APPROVED ASSEMBLIES

- Membrane Type:** SBS
- Deck Type 4I:** Lightweight Concrete, Insulated, New Construction
- Deck Description:** Cellular or Aggregate Lightweight Concrete
- System Type A(1):** Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Perlite Minimum: 1" x 2' x 4'	N/A	N/A	N/A	N/A

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Fiberglas Minimum: 1 5/16" x 4' x 4'	N/A	N/A	N/A	N/A

One or more layers of any of the following insulation:

Approved Type(s): Perlite Minimum: 1" x 2' x 4'	N/A	N/A	N/A	N/A
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Approved Type(s): Fiberglas Minimum: 1 5/16" x 4' x 4'	N/A	N/A	N/A	N/A
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Note: All insulation shall be adhered to the anchor sheet in THERMastic at 2.5 gal./sq. or in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Anchor Sheet:** One ply of BURmastic Composite Ply or BURmastic Glass Ply mechanically fastened to the deck as detailed below.
- Fastening:** Fasten anchor sheet with ES FM 60 Base Ply fasteners and FM 30 Discs or FM 90 Base Ply fasteners at a 4" side lap 8" o.c. and two rows staggered in the center of the sheet 18" o.c..
- Base Sheet:** (Optional) One ply of Poly THERM or BURmastic Composite Ply adhered to the insulated substrate with THERMastic, Premium III or type III asphalt at an application rate of 32 lb./sq. ± 15%.
- Ply Sheet:** (Optional) Two plies of THERMglas adhered to the insulated substrate with THERMastic, Premium III, Premium IV or type III asphalt at an application rate of 32 lb./sq. ± 15%.



Membrane: THERM MB 3G25 or THERM MB 3G25 FR adhered to the insulated substrate or base sheet with THERMastic, Premium III or type III asphalt at an application rate of 32 lb./sq. \pm 15% or THERM MB 2C60 adhered to the ply sheet with THERMastic, Premium III, Premium IV or type III asphalt at an application rate of 32 lb./sq. \pm 15%.

Surfacing: Use one of the following surfacing.

1. Gravel or slag applied at 300 lbs. or 400 lbs., respectively, in THERMastic or type III asphalt at an application rate of 60 lb./sq. \pm 15%.
2. Two coats of FireKote or Weatherbuster at 1 gal./sq..
3. A two part surfacing consisting of 4-5 gal./sq. of Tremlastic and a second coat of FireKote or Double Duty Aluminum at 1 gal./sq..
4. A two part surfacing consisting of two coats of FireKote at 1 gal./sq., and a final coat of Improved Polarkote at 1 gal./sq..

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



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Roofing Product Control Examiner

- Membrane Type:** SBS
- Deck Type 4I:** Lightweight Concrete, Insulated, New Construction
- Deck Description:** Cellular or Aggregate Lightweight Concrete
- System Type A(2):** Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of any of the following insulation:

Approved Type(s): **ACFoam-I, Ultra/M-II Iso-Glas, Permalite Isolite**
 Minimum: 1.5" x 3' x 4' N/A N/A N/A N/A

Approved Type(s): **ACFoam-II, White Line, UltraGard Gold**
 Minimum: 1.5" x 4' x 4' N/A N/A N/A N/A

Approved Type(s): **Multi-Max**
 Minimum: 1.5" x 4' x 8' N/A N/A N/A N/A

Approved Type(s): **Fiberglas**
 Minimum: 1⁵/₁₆" x 4' x 4' N/A N/A N/A N/A

Note: Base layers of insulation shall be bonded to anchor sheet with ½" ribbons of FAS-n-FREE adhesive applied at 1.5 gal./sq. for perlite and polyisocyanurate and 2 gal./sq. for fiberglas insulation.

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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Approved Type(s): **Fiberglas**
 Minimum: 1⁵/₁₆" x 4' x 4' N/A N/A N/A N/A

Approved Type(s): **Perlite**
 Minimum: 1" x 2' x 4' N/A N/A N/A N/A

Note: Top layer of insulation shall be bonded with ½" ribbons of FAS-n-FREE adhesive applied at 1.5 gal./sq. for perlite and polyisocyanurate and 2 gal./sq. for fiberglas insulation.

Anchor Sheet: One ply of BURmastic Composite Ply or BURmastic Glass Ply mechanically fastened to the deck as detailed below.



Fastening: Fasten anchor sheet with ES FM 60 Base Ply fasteners and FM 30 Discs or FM 90 Base Ply fasteners at a 4" side lap 8" o.c. and two rows staggered in the center of the sheet 18" o.c..

Base Sheet: (Optional) One ply of Poly THERM or BURmastic Composite Ply adhered to the insulated substrate with THERMastic, Premium III or type III asphalt at an application rate of 32 lb./sq. \pm 15%.

Ply Sheet: (Optional) Two plies of THERMglas adhered to the insulated substrate with THERMastic, Premium III, Premium IV or type III asphalt at an application rate of 32 lb./sq. \pm 15%.

Membrane: THERM MB 3G25 or THERM MB 3G25 FR adhered to the insulated substrate or base sheet with THERMastic, Premium III or type III asphalt at an application rate of 32 lb./sq. \pm 15% or THERM MB 2C60 adhered to the ply sheet with THERMastic, Premium III, Premium IV or type III asphalt at an application rate of 32 lb./sq. \pm 15%.

Surfacing: Use one of the following surfacing.

1. Gravel or slag applied at 300 lbs. or 400 lbs., respectively, in THERMastic or type III asphalt at an application rate of 60 lb./sq. \pm 15%.
2. Two coats of FireKote or Weatherbuster at 1 gal./sq..
3. A two part surfacing consisting of 4-5 gal./sq. of Tremlastic and a second coat of FireKote or Double Duty Aluminum at 1 gal./sq..
4. A two part surfacing consisting of two coats of FireKote at 1 gal./sq., and a final coat of Improved Polarkote at 1 gal./sq..

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



System Type E: Base sheet mechanically fastened.

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-insulated, New Construction

Deck Description: Cellular or Aggregate Lightweight Concrete

All General and System Limitations apply.

Base Sheet: One ply of BURmastic Composite Ply or BURmastic Glass Ply mechanically fastened to the deck as detailed below.

Fastening: Fasten base sheet with ES FM 60 Base Ply fasteners and FM 30 Discs or FM 90 Base Ply fasteners at a 4" side lap 8" o.c. and two rows staggered in the center of the sheet 18" o.c..

Ply Sheet: None.

Membrane: THERM MB 3G25 or THERM MB 3G25 FR adhered to the base sheet with THERMastic, Premium III or type III asphalt at an application rate of 32 lb./sq. ± 15%.

Surfacing: Use one of the following surfacing.

1. Gravel or slag applied at 300 lbs. or 400 lbs., respectively, in THERMastic or type III asphalt at an application rate of 60 lb./sq. ± 15%.
2. Two coats of FireKote or Weatherbuster at 1 gal./sq..
3. A two part surfacing consisting of 4-5 gal./sq. of Tremlastic and a second coat of FireKote or Double Duty Aluminum at 1 gal./sq..
4. A two part surfacing consisting of two coats of FireKote at 1 gal./sq., and a final coat of Improved Polarkote at 1 gal./sq..

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



LIGHTWEIGHT 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 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 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. **(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.)**



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Roofing Product Control Examiner

NOTICE OF ACCEPTANCE STANDARD CONDITIONS

- 1 Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.
- 2 Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
- 3 Renewals of Acceptance will not be considered if:
 - a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
 - b) The product is no longer the same product (identical) as the one originally approved;
 - c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
 - d) The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
- 4 Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
- 5 Any of the following shall also be grounds for removal of this Acceptance:
 - a) Unsatisfactory performance of this product or process;
 - b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
- 6 The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.
- 7 A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all times. The copies need not be resealed by the engineer.
- 8 Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
- 9 This Acceptance contains pages 1 through 10.

END OF THIS ACCEPTANCE



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Roofing Product Control Examiner