MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

BUILDING CODE COMPLIANCE OFFICE
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Republic Powdered Metals
2628 Pearl Road
Medina ,OH 44258

Your application for Notice of Acceptance (NOA) of:
Geoflex PIB Single-Ply Roofing Membrane Over Concrete Deck
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.: 01-0213.05
EXPIRES: 03/29/2006

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

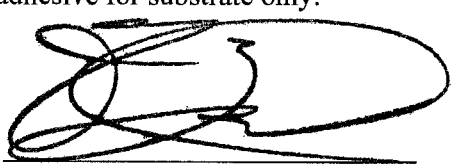
APPROVED: 03/29/2001

ROOFING SYSTEM APPROVAL

Category:	Roofing	Approval Date: **March 29, 2001**
Sub-Category:	Single Ply	
		Expiration Date: **March 29, 2006**
Material:	PIB	
Deck Type:	Concrete	
Maximum Design Pressure	-250 psf	
Fire Classification:	See General Limitation #1	

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product	Dimensions	Test Specification	Product Description
GEOFLEX 100F Membrane	42" x 60'	PA 110	45 to 60 mil PIB membrane laminated with a 40 mil polyester fabric and finished with a 2" wide prefabricated self-sealing edge.
GEOFLEX 100F Flashing	various	PA 110	100 mil PIB membrane.
GEOTRED			Rubber walkway pad with prefabricated sealing edge.
GEOFLEX 100D	various	PA 110	100 mil reinforced PIB membrane, double scaling edge and continuous end-lap expansion joints.
GEOFLEX 60U	42" x 25'	PA 110	White, 60 mil PIB membrane without fleece backing.
GEOFLEX Cover Tape			Self-sealing covering tape for counter flashing.
GEOFLEX Paste			For caulking "T" joints.
GEOFLEX Welding Solvent		PA 121	For welding and cleaning of GEOFLEX membrane.
GEOFLEX Primer		PA 121	Primer.
GEOFLEX Adhesive #111		PA 121	Brush on adhesive for application to substrate and fleece surface.
GEOTAC		PA 121	Cold adhesive for substrate only.



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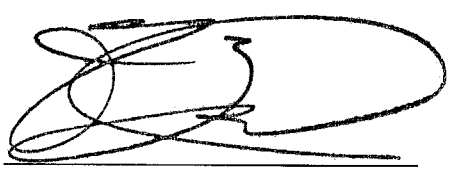
Roofing Product Control Examiner

Product	Dimensions	Test Specification	Product Description
GEOFLEX Concrete Primer		PA 121	Concrete primer.
GEOFLEX Topcoat		PA 121	Polyisobutylene base roof coating, copper appearance.
GEOLASTIC Fill			Two component elastic filler for pitch pockets.
DURATHANE		PA 121	White, polyurethane elastic sealant for termination bar or reglet.
GEOREGLET			Mill finish, aluminum reglet.
GEOREGLET Fasteners		PA 114	Fasteners and washers for use with GEOREGLET.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corporation	Wind Uplift	J.I. 0W2A7.AM	03/02/93
Factory Mutual Research Corporation	Wind Uplift	J.I. 1V1A4.AM	01/04/93
Canon Associates	Small Scale Static Uplift	TE 931221	12/21/93
Dynatech Engineering, Inc.	Wind Uplift	4391-5.95-1	05/01/95
Factory Mutual Research Corporation	Wind Uplift	J.I. 1V1A4.Am	08/17/95



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APPROVED ASSEMBLIES

Membrane Type: SINGLE PLY MEMBRANE

Deck Type 3I: Concrete Decks, Insulated, New Construction

Deck Description: 2500 psi structural concrete.

System Type A: One or more layers of insulation adhered with approved asphalt; membrane fully adhered.

All General and System Limitations apply.

Insulation Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
One or more layers of any of the following insulations:				
Approved Type(s): **PYROX, Isotherm R** Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Hy-Therm WHITE LINE** Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder may be installed over the deck or over the base layer of insulation.

Barrier: (Optional) Type II base sheet, 1" perlite, ½" or 5/8" gypsum board.

Membrane: GEOFLEX PIB membrane adhered to the insulation or Dens Deck substrate with GEOTAC adhesive applied at a rate of 1gal./1.5sq. using the equipment and procedures required by the manufacturer for the installation of the adhesive, or applied in 3" wide ribbons of approved mopping asphalt 6"o.c..

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

Maximum Fire Classification: See General Limitation #1.

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Membrane Type: SINGLE PLY MEMBRANE

Deck Type 3I: Concrete Decks, Insulated, New Construction

Deck Description: 2500 psi structural concrete.

System Type C: All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply.

Insulation Base Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
Approved Type(s): **ACFoam-II, Apache PYROX, Isotherm, UltraGard Gold SP**				
Minimum: 1.3" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **E'NRG'Y-2, ISO-95+GL**				
Minimum: 1.4" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Hy-Therm AP**				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Ultra/M-II AEF**				
Minimum: 1.4" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Multi-Max FA**				
Minimum: 1.5" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): **Extruded Polystyrene**				
Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): **Expanded Polystyrene**				
Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Insulation Base or Top Layer	Fastener Type	Fastening Detail No. (See RAS 117)	Fasteners Per Board	Fastener Density
Approved Type(s): **Apache PYROX, Isotherm**				
Minimum: 1.3" x 3' x 4'	Dekfast #14, #15 SP	[2]	6	1:2 ft.²
Approved Type(s): **E'NRG'Y-2**				
Minimum: 1.4" x 3' x 4'	Dekfast #14, #15 S	[2]	6	1:2 ft.²
Minimum: 1.4" x 3' x 4'	Rawl #14 SP	[2]	6	1:2 ft.²
Approved Type(s): **Hy-Therm AP**				
Minimum: 1.3" x 4' x 4'	Dekfast #14, #15 SP	[3]		1:2 ft.²

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Approved Type(s): **Ultra/M-II AEF**				
Minimum: 1.4" x 4' x 8'	Dekfast #14, #15 SP	[4]	16	1:2 ft.²
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$"x 4' x 4'	Rawl #14 SP	[3]	8	1:2 ft.²
Minimum: $^{15}/_{16}$"x 4' x 4'	Dekfast #14, #15 SP	[3]	8	1:2 ft.²
Approved Type(s): **Dens Deck**				
Minimum: ½" x 4' x 4'	Insulfixx, HD, S	[3]	32	1:0.5 ft.²
Minimum: ½" x 4' x 4'	Gripdek S	[3]	32	1:0.5 ft.²
Minimum: ½" x 4' x 4'	Dekfast S	[3]	32	1:0.5 ft.²

Insulation Top Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
Use one of the following over insulation listed as Base Layer.				
Approved Type(s): **Fiberglas**				
Minimum: $^{15}/_{16}$"x 4' x 4'	Rawl #14 SP	[3]	8	1:2 ft.²
Minimum: $^{15}/_{16}$"x 4' x 4'	Dekfast #14, #15 SP	[3]	8	1:2 ft.²
Approved Type(s): **Dens Deck**				
Minimum: ½" x 4' x 4'	Insulfixx, HD, S	[3]	32	1:0.5 ft.²
Minimum: ½" x 4' x 4'	Gripdek S	[3]	32	1:0.5 ft.²
Minimum: ½" x 4' x 4'	Dekfast S	[3]	32	1:0.5 ft.²

Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder may be installed over the deck or over the base layer of insulation.

Barrier: (Optional) Type II base sheet, 1" perlite, ½" or 5/8" gypsum board.

Membrane: GEOFLEX PIB membrane adhered to the insulation or Dens Deck substrate with GEOTAC adhesive applied at a rate of 1gal./1.5sq. using the equipment and procedures required by the manufacturer for the installation of the adhesive, or applied in 3" wide ribbons of approved mopping asphalt 6"o.c..

Maximum Design Pressure: -45 psf.

Maximum Fire Classification: See General Limitation #1.

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System Limitations:

1 The following assembly is approved to a maximum design pressure of **-250 psf.*** No substitutions shall be made:

a.	Deck Type:	Poured concrete, unprimed.
b.	Insulations:	None
c.	Base Sheet:	None
d.	Membrane:	GEOFLEX PIB 100 mil membrane bonded to the unprimed concrete surface with GEOTAC adhesive at an application rate of 100 ft² per gallon.

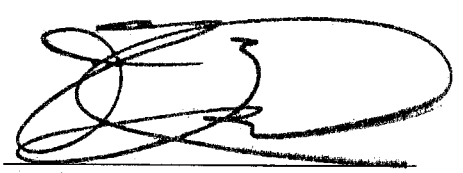
2 The following assembly is approved to a maximum design pressure of **-120 psf.*** No substitutions shall be made:

a.	Deck Type:	Poured concrete primed with ASTM D 41 primer.
b.	Insulation:	Minimum 1½" E'NRG'Y 2, adhered to the fully primed concrete substrate with ASTM D 312 type III asphalt applied within the EVT range at a rate of 20-40 lbs./sq.
c.	Base Sheet:	None
d.	Membrane:	GEOFLEX PIB 100 mil membrane bonded to an approved insulated surface with GEOTAC adhesive at an application rate of 100 ft² per gallon.

3 The following assembly is approved to a maximum design pressure of **-236 psf.*** No substitutions shall be made:

a.	Deck Type:	Poured concrete primed with ASTM D 41 primer.
b.	Insulation:	Base Layer: Minimum 1½" E'NRG'Y 2, adhered to the fully primed concrete substrate with ASTM D 312 type III asphalt applied within the EVT range at a rate of 20-40 lbs./sq.. Top Layer: ¼" minimum Dens Deck bonded in ASTM D 312 asphalt applied within the EVT range at a rate of 20-40 lbs./sq..
c.	Base Sheet:	None
d.	Membrane:	GEOFLEX PIB membrane bonded to an approved insulation surface with GEOTAC adhesive at an application rate of 100 ft² per gallon.

***Note:** The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, corners). No rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners, and corners).



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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 Professional Engineer, Registered 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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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.

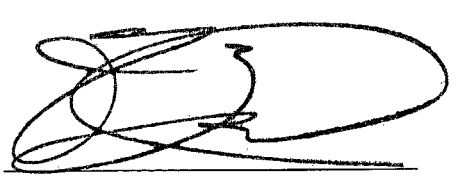
6 The Notice of Acceptance number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the Notice of Acceptance is displayed, then it shall be done in its entirety.

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 9.

END OF THIS ACCEPTANCE



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