MIAMI-DADE

**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

**Custom Seal, Inc.**
**708 Graham Drive P. O. Box 1290**
**Fremont ,OH 43420**

Your application for Notice of Acceptance (NOA) of:
**PVC Roof Systems for Poured Gypsum 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.: 00-0918.04**
**EXPIRES: 10/19/2003**

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: 10/19/2000**

## ROOFING SYSTEM APPROVAL

| | | |
|---|---|---|
| Category: | Roofing | Approval Date: **October 19, 2000** |
| Sub-Category: | Single Ply | |
| | | Expiration Date: **October 19, 2003** |
| Material: | PVC | |
| Deck Type: | Gypsum | |
| Maximum Design Pressure | -45 psf (See Specific System Herein) | |
| Fire Classification: | See General Limitation #1 | |

## TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

| Product | Dimensions | Test Specification | Product Description |
|---|---|---|---|
| Custom Seal membrane | .048" or .060" thick, 6' x 100' | PA 110 | PVC roofing membrane. |
| Custom Seal-C membrane | .048" or .060" thick, 6' x 100' | PA 110 | PVC roofing membrane with a vinyl/acrylic coating on the top surface. |
| Custom Seal Foam/Atlas | Various | PA 110 | Polyisocyanurate insulation (flat or tapered) |
| Generic | Various | PA 110 | Polyisocyanurate / high density wood fiber composite insulation. |
| Custom Seal Foam/Atlas | Various | PA 110 | Polyisocyanurate insulation |
| Custom Seal Steel | 2" round x 0.030" | PA 114<br>PA 117 | Steel stress plate for membrane attachment. |
| Custom Seal Plastic | 2" round | PA 117 | Polypropylene stress plate for membrane attachment. |
| Custom Seal Seam Disc | 2" round x 0.030" | PA 114<br>PA 117 | Steel stress plate for membrane attachment. |
| Custom Seal Bar Anchor | 1" x 10 ft x 0.46" | PA 114 | Steel bar for membrane attachment. |
| Custom Seal #15 XHD Fastener | Various | PA 114<br>PA 117 | Fastener for membrane attachment to steel and concrete decks. |
| Custom Seal XHD Barbed Seam Plate | 2-$^{3}/_{8}$" round x 0.038" | PA 114<br>PA 117 | Steel stress plate for membrane attachment. |
| Custom Seal RM Waterbased Adhesive | 5 gallon | Proprietary | Water based membrane adhesive |



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| Product | Dimensions | Test Specification | Product Description |
|---|---|---|---|
| Custom Seal RM Bonding Adhesive | 5 gallon | Proprietary | Solvent based membrane adhesive. |

## TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

| Product | Dimensions | Test Specification | Product Description | Manufacturer |
|---|---|---|---|---|
| Millox | various | PA 110 | Polyisocyanurate foam insulation | Apache Products Co. (with current NOA) |
| Pyrox | various | PA 110 | Polyisocyanurate foam insulation | Apache Products Co. (with current NOA) |
| ACFoam II | various | PA 110 | Polyisocyanurate foam insulation | Atlas (with current NOA) |
| Thermax Hy-Tec | various | PA 110 | Polyisocyanurate foam insulation | Celotex Corp. (with current NOA) |
| Hy-Therm AP | various | PA 110 | Polyisocyanurate foam insulation | Celotex Corp. (with current NOA) |
| Energy-Lok | various | PA 110 | Polyisocyanurate foam insulation | Celotex Corp. (with current NOA) |
| ISO 95+ GL | various | PA 110 | Polyisocyanurate foam insulation | Firestone (with current NOA) |
| Ultra/C-I | various | PA 110 | Polyisocyanurate foam insulation | Homasote Co. (with current NOA) |
| E'NERG'Y PSI-25 | various | PA 110 | Polyisocyanurate foam insulation | Johns Manville (with current NOA) |
| E'NRG'Y-2 | various | PA 110 | Polyisocyanurate foam insulation | Johns Manville (with current NOA) |
| UltraGard Gold | various | PA 110 | Polyisocyanurate foam insulation | Johns Manville (with current NOA) |
| Multi Max FA | Various | PA 110 | Polyisocyanurate foam insulation | R-Max (with current NOA) |



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| Product | Dimensions | Test Specification | Product Description | Manufacturer |
|---|---|---|---|---|
| Celotherm | various | PA 110 | perlite insulation | Celotex Corp. (with current NOA) |
| ConPerl | various | PA 110 | perlite insulation | Conglas (with current NOA) |
| GAFTEMP Permalite | various | PA 110 | perlite insulation | GAF Materials Corp. (with current NOA) |
| Fesco Board | various | PA 110 | perlite insulation | Johns Manville (with current NOA) |
| Esgard | various | PA 110 | wood fiberboard insulation | BPCO, Inc. (with current NOA) |
| Celotex Fiberboard | various | PA 110 | wood fiberboard insulation | Celotex Corp. (with current NOA) |
| GAFTEMP Fiberboard | various | PA 110 | wood fiberboard insulation | GAF Materials Corp. (with current NOA) |
| Huebert Fiberboard | various | PA 110 | wood fiberboard insulation | Huebert, Inc. (with current NOA) |
| KopR Wood Fiber | various | PA 110 | wood fiberboard insulation | Koppers Industries (with current NOA) |
| Type X Gypsum | various | PA 110 | gypsum board | Generic |
| Olympic Heavy Duty (HD) | Various | PA 114 | Membrane fastener for wood, steel or concrete decks | ITW Buildex (with current NOA) |
| Olympic Standard | 3" round | PA 114 | 3" round galvalume AZ55 steel plate | Olympic (with current NOA) |
| Olympic Polypropylene | 3.25" round | PA 114 | Polypropylene stress plate | Olympic (with current NOA) |
| SFS Extra Load Fastener HD | Various | PA 114 | Membrane fastener for steel or concrete decks | SFS Stadler (with current NOA) |
| SFS Extra Load Plate LR6 | 2.37" round | PA 114 | Galvalume AZ55 stress plate | SFS Stadler (with current NOA) |



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## EVIDENCE SUBMITTED:

| Test Agency/Identifier | Name | Report | Date |
|---|---|---|---|
| Factory Mutual Research Corporation | J.I. 1T7A5.AM | Wind Uplift | 01/18/93 |
| | J.I. 2X1A5.AM | Wind Uplift | 11/31/93 |
| | J.I. 2X9A3.AM | Wind Uplift | 03/04/94 |
| | J.I. 3B1A1.AM | Wind Uplift | 07/21/97 |
| | J.I. 3Z7A0.AM | Wind Uplift | 03/05/97 |
| | J.I. 3B4A0.AM | Wind Uplift | 01/31/97 |
| | J.I. 0Z9A6.AM | Wind Uplift | 06/05/95 |
| | J.I. 2Z9A4.AM | Wind Uplift | 11/14/95 |
| | J.I. 0D7A5.AM | Wind Uplift | 09/24/97 |
| South Florida Test Service | GFRS-1-X-118 | Physical Properties | 05/07/92 |
| Underwriters Laboratories, Inc. | UL Roofing Materials and Systems Directory | Fire Classification File No. R9334 | Published Annually |



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## SYSTEMS:

**Deck Type 6I**: Poured Gypsum, Insulated, New Construction, Reroof

**Deck Description:** Poured Gypsum Concrete

**System Type D:** Membrane mechanically attached over preliminary fastened insulation.

**All General and System Limitations apply.**

| Insulation Base or Top Layer | Fastener Type | Fastening Detail No. | Fasteners Per Board | Fastener Density |
|---|---|---|---|---|
| One or more layers of the following insulations: | | | | |
| Approved Type(s): **ACFoam II, Hy-Tec, E'NRG'Y-2, PSI-25, Custom Seal Iso 1, Custom Seal Iso HC, UltraGard, Hy-Therm AP, ISO 95+ GL, Pyrox, Millox, MultiMax FA, Ultra/M-II AEF** | | | | |
| Minimum: 1.3" x 4' x 4' | N/A | N/A | N/A | N/A |
| Approved Type(s): **Celotherm, ConPerl, GAFTEMP Permalite, Fesco Board** | | | | |
| Minimum: ¾" x 2' x 4' | N/A | N/A | N/A | N/A |
| Approved Type(s): **Esgard, Celotex Fiberboard, GAFTEMP Fiberboard, Huebert Fiberboard** | | | | |
| Minimum: 1" x 4' x 4' | N/A | N/A | N/A | N/A |
| Approved Type(s): **Armor Board High Density, BP High Strength, FM-90 Traffic Top/High Density, Roof Insulation Board, High Density Fiberboard, Fiber Base HD1/HD6** | | | | |
| Minimum: ½" x 4' x 4' | N/A | N/A | N/A | N/A |

**Note: Top insulation layer shall have preliminary attachment at a density of two Approved insulation fasteners per board for insulation boards having any one dimension no greater than 4 ft. and a minimum of four Approved insulation fasteners per board for insulation boards having any one dimension greater than 4 ft. Composite insulation panels shall be placed with the polyisocyanurate side down.**

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

Barrier: (Optional) ½" type X gypsum or ¼" Dens Deck

Membrane: Custom Seal or Custom Seal-C membrane fastened through preliminary attached insulation at sidelaps following one of the fastening methods specified below.

Fastening: Fasten using Olympic N.T.B. Magnum with 2" Head spaced 6" o.c. within 4.5" laps spaced 57" o.c. Laps are sealed with a 2" heat weld.

Maximum Design Pressure: -45 psf

Maximum Fire Classification: See General Limitation #1.

Maximum Slope: See General Limitation #1.



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**Deck Type 6:** Poured Gypsum, Uninsulated, New Construction, Reroof

**Deck Description:** Poured gypsum concrete.

**System Type E:** Membrane mechanically attached to deck.

**All General and System Limitations apply.**

Barrier: (Optional) ½" type X gypsum or ¼" Dens Deck

Membrane: Custom Seal or Custom Seal-C membrane fastened through preliminary attached insulation at sidelaps following one of the fastening methods specified below.

Fastening: Fasten using Olympic N.T.B. Magnum with 2" Head spaced 6" o.c. within 4.5" laps spaced 57" o.c. Laps are sealed with a 2" heat weld.

Maximum Design Pressure: -45 psf.

Maximum Fire Classification: See General Limitation #1.

Maximum Slope: See General Limitation #1.



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## 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 applied 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 may 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, is 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 the 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 or Architect may be submitted. Said revised fastener spacing utilize the withdrawal resistance value taken from TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.

7 Perimeter and corner areas shall comply with the enhanced uplift pressure of these areas, as calculated in compliance with applicable Building Code. Fastener densities shall be increase for both insulation and base sheet as needed 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 the wind load requirements of applicable Building Code.

9 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). **(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**



Frank Zuloaga, RRC
Roofing Product Control Examiner