MIAMI-DADE

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)

**CertainTeed Corporation (PA)**
**1400 Union Meeting Road, P.O. Box 1100**
**Blue Bell, PA 19422**

**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 Florida Building Code and the High Velocity Hurricane Zone of the Florida Building Code.

**DESCRIPTION: CertainTeed Conventional Built-Up-Roof System over Lightweight Concrete 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 revises NOA No. 08-0227.01 and consists of pages 1 through 8.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

## ROOFING SYSTEM APPROVAL

| | |
|---|---|
| **Category:** | Roofing |
| **Sub-Category:** | Built-Up Roofing |
| **Material:** | Fiberglass |
| **Deck Type:** | Lightweight Concrete |
| **Maximum Design Pressure** | **-52.5 psf** |

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

**TABLE 1**

| Product | Dimensions | Test Specification | Product Description |
|---|---|---|---|
| All Weather/Empire Base Sheet | 36" x 65'10"; Roll weight: 86 lbs. (2 squares) | ASTM D 4601 Type II UL Type 15 | Asphalt coated, fiberglass reinforced base sheet. |
| Flintglas® Mineral Surfaced Cap Sheet | 36" X 32'10"; Roll Weight: 78 lbs. (1 square) | ASTM D 3909 | Asphalt impregnated and coated inorganic glass fiber surfaced with mineral granules used as the top ply in conventional built-up roof membranes. |
| Flintglas® Mineral Surfaced Cap CoolStar | 36" X 32'10"; Roll Weight: 78 lbs. (1 square) | ASTM D 3909 | Asphalt impregnated and coated inorganic glass fiber surfaced with mineral granules used as the top ply in conventional built-up roof membranes. Covered with reflective CoolStar Coating. |
| Flintglas® Ply Sheet Type IV or VI | 36" x 164'7"; Roll weight: 40/55 lbs. (5 squares) | ASTM D 2178 Type IV or VI UL Type G1 | Fiberglass, asphalt impregnated ply sheet. |
| Flex-I-Glas or Flex-I-Glas FR Base Sheet | 36" x 98'9"; Roll weight: 90 lbs. (3 squares) | ASTM D 5147 | SBS Modified, fiberglass reinforced base sheet. |
| GlasBase™ Base Sheet | 36" x 98'9"; Roll weight: 69 lbs. (3 squares) | ASTM D 4601 UL Type G2 | Asphalt coated, fiberglass base sheet. |
| No. 15 Perforated Felt | 36" x 144', Roll weight: 90 lbs. (4 square) | ASTM D 226 Type I | Organic asphalt saturated felt. |
| Yosemite® Buffer Base Sheet | 36" x 32'10"; Roll weight: 90 lbs. (1 square) | ASTM D 3909 ASTM D 4897 UL Type 30 | Mineral Surfaced fiberglass reinforced buffer sheet. |

## APPROVED INSULATIONS:

**TABLE 2**

| Product Name | Product Description | Manufacturer (With Current NOA) |
|---|---|---|
| White Line | Polyisocyanurate foam insulation | Apache Products Co. |
| ACFoam II, III | Polyisocyanurate foam insulation | Atlas Energy Products |
| High Density Wood Fiberboard | Wood fiber insulation board | generic |
| Perlite Insulation | Perlite insulation board | generic |
| Dens Deck, Dens Deck Prime | Water resistant gypsum board | G-P Gypsum Corp. |
| H-Shield | Polyisocyanurate foam insulation | Hunter Panels |
| ENRGY-3 | Polyisocyanurate foam insulation | Johns Manville |
| Multi-Max & FA | Polyisocyanurate roof insulation | RMax, Inc. |

## APPROVED FASTENERS:

**TABLE 3**

| Fastener Number | Product Name | Product Description | Dimensions | Manufacturer (With Current NOA) |
|---|---|---|---|---|
| 1. | FM-30, FM-45, FM-60, FM-90 Fasteners | Base ply fastening systems for lightweight concrete decks. | | ES Products, Inc. |
| 2. | Olympic CR Base Felt Fastener | Fastener assembly for Base Sheet fastening only | | OMG |
| 3. | Base-Lok Fastener | Nylon base sheet fastener. | | Simplex Nails & Fasteners |

## EVIDENCE SUBMITTED:

| Test Agency/Identifier | Name | Report | Date |
|---|---|---|---|
| Applied Research Laboratories | Physical Properties | 28013 | 06/02/87 |
| Trinity\|ERD | TAS 117 (B) | 3503.10.06 | 10/10/06 |
| | TAS 117 (B) | O6490.04.07-R1 | 06/27/07 |
| | TAS 117 (B)/ ASTM D 6862 | C8500SC.11.07 | 11/30/07 |
| | FM 4470, TAS 114 | C8370.08.08 | 08/19/08 |
| | ASTM Requirements | C10080.09.08 | 09/04/08 |
| Momentum Technologies, Inc. | ASTM D 4601 | AX31G8D | 09/05/08 |
| | ASTM D 3909/ D 4897 | AX31G8C | 09/05/08 |
| Factory Mutual Research Corp. | Current Insulation Fastening Requirements | FMRC 1996 | 01/01/96 |
| | FMRC 4470 | J.I. #3Y8A1.AM | 03/23/96 |
| | FMRC 4454 | J.I. 0D3A3.AM | 04/04/97 |
| | FMRC 4470 | J.I. 2D0A0.AM | 12/23/98 |
| | FMRC 4470 | J.I. 1D7A4.AM | 11/09/98 |
| Underwriters Laboratories, Inc. | Fire Classification Compliance | R11656 | 07/13/87 |
| United States Testing Company | ASTM D 5147 | 97457-4 | 06/03/88 |
| | ASTM D 5147 | 97-457-2R | 12/02/87 |

## APPROVED ASSEMBLIES

**Deck Type 4I:** Lightweight Concrete, Insulated

**Deck Description:** Approved Cellular Lightweight Concrete

**System Type A:** Anchor sheet mechanically fastened, one or more layer of insulation adhered with approved asphalt.

**All General and System limitations apply.**

One or more layers of any of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners** | **Fastener Density/ft$^2$** |
|---|---|---|
| **AC-Foam II, ENRGY 3, Multi-Max, H-Shield Minimum 1" thick** | **N/A** | **N/A** |
| **High Density Wood Fiber Minimum ½" thick** | **N/A** | **N/A** |
| **Perlite Minimum ¾" thick** | **N/A** | **N/A** |
| **Dens Deck, Dens-Deck Prime Minimum ¼" thick** | **N/A** | **N/A** |

| **(Optional) Top Insulation Layer** | **Insulation Fasteners** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Any Insulations listed for Base Layer, above.** | | |

**Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot 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. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.**

Anchor Sheet Options: (Option #1) One ply of All Weather/Empire, Flex-I-Glas, Flex-I-Glas FR or PolySMS Base mechanically attached to the deck using ES Products FM-90 Base Ply Fasteners spaced 7½" o.c. in the 4" side lap and 7½" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –45 psf, See General Limitation #7.)***

(Option #2.) One ply of GlasBase, All Weather/Empire, Flex-I-Glas, or Flex-I-Glas FR mechanically attached to the deck using Simplex Base-Lok fasteners spaced 9" o.c. in the 4" side lap and 9" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –45 psf, See General Limitation #7.)***

(Option #3.) One ply of All Weather/Empire mechanically attached to the deck using Simplex Base-Lok fasteners spaced 9" o.c. in the 4" side lap and 12" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –52.5 psf, See General Limitation #7.)***

(Option #4.) One ply of All Weather/Empire or GlasBase mechanically attached to the deck using Olympic CR Base Ply Fasteners, or ES Products FM-90 Base Ply Fasteners spaced 7" o.c. in the 4" side lap and 7" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –52.5 psf, See General Limitation #7.)***

Base Sheet: (Optional) Install one ply of All Weather/Empire, Flex-I-Glas or GlasBase base sheet directly over the top layer of insulation. Adhere with any approved mopping asphalt at an application rate of 20-35 lbs./sq.

Ply Sheet: Two or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) or #15 Asphalt Perforated Felt ply sheet adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

Cap Sheet: (Optional) One ply of Flintglas Mineral Surface Cap Sheet or Flintglas Mineral Surfaced Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install one of the following:

1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
2. A two part coating consisting of a base coat of Static Asphalt Fibered Emulsion at rate of 3 gal./sq. or Monoform compound; surfaced with 1 gal./sq. Sta-Kool non-fibered aluminum coating or fibered APOC No. 212.

Maximum Design Pressure: See fastening requirements above

**Deck Type 4:** Lightweight Concrete, Non-insulated

**Deck Description:** Approved Cellular Lightweight Concrete

**System Type E:** Base sheet mechanically fastened.

**All General and System limitations apply.**

Base Sheet Options: (Option #1) One ply of All Weather/Empire, Flex-I-Glas, Flex-I-Glas FR or PolySMS Base mechanically attached to the deck using ES Products FM-90 Base Ply Fasteners spaced 7½" o.c. in the 4" side lap and 7½" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –45 psf, See General Limitation #7.)***

(Option #2.) One ply of GlasBase, All Weather/Empire, Flex-I-Glas or Flex-I-Glas FR mechanically attached to the deck using Simplex Base-Lok fasteners spaced 9" o.c. in the 4" side lap and 9" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –45 psf, See General Limitation #7.)***

(Option #3.) One ply of All Weather/Empire mechanically attached to the deck using Simplex Base-Lok fasteners spaced 9" o.c. in the 4" side lap and 12" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –52.5 psf, See General Limitation #7.)***

(Option #4.) One ply of All Weather/Empire or GlasBase mechanically attached to the deck using Olympic CR Base Ply Fasteners or ES Products FM-90 Base Ply Fasteners spaced 7" o.c. in the 4" side lap and 7" o.c. in two evenly divided, staggered rows in the center of the sheet.
***(Maximum Design Pressure –52.5 psf, See General Limitation #7.)***

Ply Sheet: Two or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) or #15 Asphalt Perforated Felt ply sheet adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

Cap Sheet: (Optional) One ply of Flintglas Mineral Surface Cap Sheet or Flintglas Mineral Surfaced Cap CoolStar adhered in a full mopping of approved asphalt at an application rate of 20-35 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install one of the following:

1. Flood coat of hot asphalt with an application rate of 60 lbs./sq. ± 20%; plus gravel or slag with an application rate of 400 lbs./sq. & 300 lbs./sq., respectively.
2. A two part coating consisting of a base coat of Static Asphalt Fibered Emulsion at rate of 3 gal./sq. or Monoform compound; surfaced with 1 gal./sq. Sta-Kool non-fibered aluminum coating or fibered APOC No. 212.

Maximum Design Pressure: See fastening requirements above

## LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.
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.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

## GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**

# END OF THIS ACCEPTANCE