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)

**Firestone Building Products Company**
**250 West 96th Street**
**Indianapolis, IN 46260**

**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: Firestone EPDM Single Ply Roof Systems 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. 08-0324.09 and consists of pages 1 through 15.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

## ROOFING SYSTEM APPROVAL

| | |
|---|---|
| Category: | Roofing |
| Sub-Category: | Single Ply |
| Material: | EPDM |
| Deck Type: | Lightweight Concrete |
| Maximum Design Pressure | -240 psf |

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

**TABLE 1**

| Product | Dimensions | Test Specifications | Product Description |
|---|---|---|---|
| Standard RubberGard® | 45 & 60 mil | ASTM D 4637 Type I | Non-Reinforced EPDM membrane. |
| Fire Retardant RubberGard® | 45 & 60 mil | ASTM D 4637 Type I | Non-Reinforced Fire Retardant EPDM membrane. |
| Standard Reinforced RubberGard® | 45 & 60 mil | ASTM D 4637 Type II | Polyester scrim reinforced EPDM membrane. |
| Fire Retardant Reinforced RubberGard® | 45 & 60 mil | ASTM D 4637 Type II | Polyester scrim reinforced fire retardant EPDM membrane. |
| RubberGard MAX® | 45, 60 & 75 mil | ASTM D 4637 Type II | Polyester scrim reinforced EPDM membrane. |
| RubberGard MAX FR® | 45, 60 & 75 mil | ASTM D 4637 Type II | Fire Retardant Polyester scrim reinforced EPDM membrane . |
| RubberGard MAX PT® | 45 & 60 mil | ASTM D 4637 Type II | Polyester scrim reinforced EPDM membrane with integrated 3" pre-applied seam tape. |
| RubberGard Platinum® | 90 mil | ASTM D 4637 Type I | Non-Reinforced EPDM membrane. |
| RubberGard Platinum LS-FR® | 90 mil | ASTM D 4637 Type I | Non-Reinforced EPDM membrane. |
| RubberGard LS-FR® | 45 & 60 mil | ASTM D 4637 Type I | Fire Retardant Non-Reinforced EPDM membrane. |
| RubberGard LS-FR PT® | 60 mil | ASTM D 4637 Type I | Fire Retardant Non-Reinforced EPDM membrane with integrated 3" pre-applied seam tape. |
| RuberGard EcoWhite® | 60 mil | ASTM D 4637 Type I | Non-Reinforced, bi-laminate, white on black EPDM membrane. |
| EPDM Batten Cover Strip | .045" x 8" x 150' | ASTM D 4637 | EPDM cover strip |
| FR EPDM Batten Cover Strips | .045" x 7.5" x 150' | ASTM D 4637 | Fire Retardant EPDM cover strip |
| EPDM FormFlash | various | ASTM D 4811 | Self-curing EPDM flashing |
| Neoprene FormFlash | .060" x 24" x 100'<br>.060" x 48" x 100' | ASTM D 4811 | Self-curing neoprene flashing |
| Reinforced Perimeter Fastening Strip | .045" x 6" x 100' | ASTM D 4637 | Non-dusted EPDM reinforced strip for non-penetrating base tie-in details |

| Product | Dimensions | Test Specifications | Product Description |
|---|---|---|---|
| Bonding Adhesive BA-2004 T | 5 gallon pail | Proprietary | Neoprene based bonding adhesive |
| Splice Adhesive SA-1065 | 1 gallon and 5 gallon pails | Proprietary | Synthetic polymer based adhesive |
| UltraPly Bonding Adhesive | 5 gal. pail | Proprietary | Solvent based adhesive |
| General Purpose Sealant S-40A | 10.3 oz. tube | Proprietary | Silicone sealant |
| Night Sealant S-30A | 10 oz. tube | Proprietary | Synthetic polymer based caulking |
| Acryli-Top Coating PC-100 | 5 gallon pail | Proprietary | Acrylic coating |
| Aluminum Drain Bar | .063" to .110" thick x 4" x 10' | FM 4450 | Aluminum termination bar. |
| Polymer Batten | .050" x 1.0" x 250' | Proprietary | EPDM anchor |
| Firestone EdgeGard | Various | Proprietary | Roof edging system |
| QuickPrime, QuickPrime Plus | 5 gallon pail | Proprietary | Primer used to clean and prime EPDM |
| QuickSeam Flashing | .080" x various widths x 100' | Proprietary | Semi-cured EPDM flashing laminated to cure seam tape |
| QuickSeam Batten Cover | .095" x various widths x 100' | Proprietary | Cured EPDM and a seam adhesive laminate |
| QuickSeam Joint Cover | .070" x 5.75" diameter | Proprietary | FormFlash with two layers of butyl/EPDM adhesive tape laminate |
| QuickSeam Splice Tape | 3" x 100' | Proprietary | Tape for field splicing |
| QuickSeam R.M.A. Strip | 10" x 100' | Proprietary | Strip of RubberGard MAX with QuickSeam Tape for anchoring membrane to substrate |
| Splice Wash SW-100 | 5 gallon pail | Proprietary | Cleaning and prep solution for EPDM |
| Lap Sealant LS-3029 | 10 oz. tube, 1 qt. tube and 5 gallon pails | Proprietary | Sealant for membrane laps |
| Pourable Sealer S-10 | .78 gallon, Part A .10 gallon, Part B | Proprietary | Two part polyurethane sealant |
| Water Block Seal S-20 | 10 oz. tube | Proprietary | Water sealant |
| Firestone Protection Mat | 15" x 320' | Proprietary | Black polypropylene, non-woven, needle-punched fabric |
| Firestone Walkway Pads | 30" x 30" x .300 thick | Proprietary | EPDM walkway pads |

## APPROVED INSULATIONS:

**TABLE 2**

| Product Name | Product Description | Manufacturer (With Current NOA) |
|---|---|---|
| ACFoam II | Isocyanurate Insulation | Atlas Roofing Corp. |
| ISO 95+ GL, 95+ GW / Rhoflex Isocyanurate GL | Isocyanurate Insulation | Firestone |

## APPROVED INSULATIONS:

TABLE 2

| Product Name | Product Description | Manufacturer (With Current NOA) |
|---|---|---|
| Fiber Top, FiberTop C | Regular wood fiber insulation | Firestone |
| RetroGard HD Cover Board | High density polyisocyanurate for use as a cover board | Firestone |
| IsoGard HD Cover Board | High density polyisocyanurate for use as a cover board | Firestone |
| Securock | Gypsum cover board | USG Co. |
| ENRGY 3, ENRGY PSI-25 | Isocyanurate Insulation | Johns Manville |
| Wood Fiberboard | Regular wood fiber insulation | Generic |
| High Density Wood Fiberboard | High Density Wood Fiber insulation board. | Generic |
| Perlite Insulation Board | Perlite Insulation | Generic |
| Type X Gypsum | Gypsum Wallboard | Generic |
| XPS | Extruded polystyrene | Generic |
| Multi-Max FA | Isocyanurate Insulation | Rmax, Inc. |

## APPROVED FASTENERS:

TABLE 3

| Fastener Number | Product Name | Product Description | Dimensions | Manufacturer (With Current NOA) |
|---|---|---|---|---|
| 1. | N/A | N/A | N/A | N/A |

## EVIDENCE SUBMITTED:

| Test Agency | Test Identifier | Description | Date |
|---|---|---|---|
| Underwriters Laboratories, Inc. | Letter | UL790 | 07/09/93 |
| | 88NK1932 | UL790 | 12/08/93 |
| | 91NK15494 | UL790 | 02/28/92 |
| | 90NK16256 | UL790 | 02/27/91 |
| | 91NK7843 | UL790 | 08/06/91 |
| Factory Mutual Research Corp. | J.I. #1V1A7.AM | FM 4470 | 06/25/92 |
| | J.I. #1W3A4.AM | FM 4470 | 12/01/92 |
| | J.I. #1T7A3.AM | FM 4470 | 01/18/92 |
| | J.I. #1V6A9.AM | FM 4470 | 02/27/92 |
| | J.I. #2W6A2.AM | FM 4470 | 06/25/93 |
| | J.I.# 2X9A8.AM | FM 4470 | 06/14/94 |
| | 3014692 | FM 4470 | 08/05/03 |
| | 3031293 | FM 4470 | 11/29/07 |
| | 3028164 | FM 4470 | 11/02/07 |
| | 3014031 | FM 4470 | 07/22/02 |
| Trinity\|ERD | 02764.09.05-R1 | FM 4470/TAS 114 | 12/10/07 |
| | 02762.03.05-R1 | FM 4470/TAS 114 | 12/10/07 |
| | F9240.03.09-1-R1 | ASTM D 4637 | 07/10/09 |
| | F9240.03.09-R12 | ASTM D 4637 | 07/30/09 |
| | F9240.11.08-R1 | ASTM D 4637 | 07/10/09 |
| | F9240.07.08-R2 | ASTM D 4637 | 07/10/09 |

## APPROVED ASSEMBLIES

**Membrane Type:** Single Ply, EPDM, Reinforced, Nonreinforced

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

**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; membrane fully adhered.

**All General and System Limitations apply.**

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL, ENRGY 3, ENRGY PSI-25, Multi-Max FA, ACFoam II Minimum 1.4" thick** | **N/A** | **N/A** |

| **Top Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **FiberTop, Minimum ½" thick** | **N/A** | **N/A** |

**Note: Apply top layer of insulation in a full mopping of any approved mopping 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.**

Barrier: Install one ply of Firestone MB Base Sheet, Celotex Channel Vent GB, GAF GAFGLAS Stratavent, Manville Ventsulation or Tamko Vapor Chan mechanically attached, as below.

Fasteners: ES 90 base ply fasteners, 7 ½" o.c. at the lap and two rows 18" o.c. in the field; or, Olympic BasePly fasteners, 7 ½" o.c. at the lap and two rows 18" o.c. in the field.

Membrane: Fully adhere any RubberGard® EPDM membrane to the insulation with Firestone Bonding Adhesive BA-2004 T at a rate of 45-60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces).

Surfacing: (Optional) Firestone Acryli-Top (PC-100) to be applied at 1 gal/100 sq. ft. with an airless sprayer. If roller applied, two separate coats of 200 sq. ft. per gallon are required.

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

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, minimum 160 psi Elastizell |
| **System Type A(2):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with OlyBond 500 Adhesive in ¾" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer (Optional)** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Tapered ISO 95+ GL Minimum ½" thick start with a ¼ : 12 taper** | **N/A** | **N/A** |
| **Fiber Top Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck Minimum ¼" thick** | **N/A** | **N/A** |

**Note: 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. 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 used as a top layer shall be placed with the polyisocyanurate side facing down.**

| | |
|---|---|
| Membrane: | Fully adhere any RubberGard® EPDM membrane to the insulation with Firestone BA 2004 T Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces). |
| Surfacing: | (Optional) Firestone Acryli-Top (PC-100) to be applied at 1 gal/100 sq. ft. with an airless sprayer. If roller applied, two separate coats of 200 sq. ft. per gallon are required. |

Maximum Design Pressure:
-97.5 psf with Fiber Top cover board (See General Limitation #9)
-165 psf with Dens Deck cover board (See General Limitation #9)
-195 psf with Tapered ISO 95+ GL or without cover board (See General Limitation #9)

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, minimum 160 psi Elastizell |
| **System Type A(3):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL**<br>**Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with OlyBond 500 Adhesive in ¾" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Firestone RetroGard HD**<br>**Minimum ½" thick** | **N/A** | **N/A** |

**Note: Top insulation layer shall be adhered with Firestone I.S.O. FIX Adhesive applied in ¾ to 1 in. wide ribbons spaced 12 in. o.c. 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 boards used as a top layer shall be installed with the polyisocyanurate face down.**

| | |
|---|---|
| Membrane: | Firestone (Reinforced or Non-Reinforced) Standard RubberGard, Fire Retardant RubberGard, RubberGard LS-FR, RubberGard LS-FR PT, RubberGard MAX, RubberGard MAX PT, RubberGard MAX FR, RubberGard EcoWhite or RubberGard Platinum EPDM membrane fully adhered to the cover board with Firestone BA-2004 T Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces for a total of 120 sq. ft./gal). The roof cover side and end laps are sealed with Firestone RubberGard SA-1065 Splice Adhesive or QuickSeam Splice Tape. |
| Maximum Design Pressure: | -105 psf (See General Limitation #9) |

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, min. 200 psi Elastizell, Celcore or Mearlcrete |
| **System Type A(4):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Firestone RetroGard HD Minimum ½" thick** | **N/A** | **N/A** |

**Note: Top insulation layer shall be adhered with Firestone I.S.O. FIX Adhesive applied in ¾ to 1 in. wide ribbons spaced 12 in. o.c. 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 boards used as a top layer shall be installed with the polyisocyanurate face down.**

| | |
|---|---|
| Membrane: | Firestone (Reinforced or Non-Reinforced) Standard RubberGard, Fire Retardant RubberGard, RubberGard LS-FR, RubberGard LS-FR PT, RubberGard MAX, RubberGard MAX PT, RubberGard MAX FR, RubberGard EcoWhite or RubberGard Platinum EPDM membrane fully adhered to the cover board with Firestone BA-2004 T Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces for a total of 120 sq. ft./gal). The roof cover side and end laps are sealed with Firestone RubberGard SA-1065 Splice Adhesive or QuickSeam Splice Tape. |
| Maximum Design Pressure: | -105 psf (See General Limitation #9) |

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, min. 200 psi Elastizell |
| **System Type A(5):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer (Optional)** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Tapered ISO 95+ GL Minimum ½" thick start with a ¼ : 12 taper** | **N/A** | **N/A** |
| **Fiber Top Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck Minimum ¼" thick** | **N/A** | **N/A** |

**Note: 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. 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 used as a top layer shall be placed with the polyisocyanurate side facing down.**

| | |
|---|---|
| Membrane: | Fully adhere any RubberGard® EPDM membrane to the insulation with Firestone BA 2004 T Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces). |
| Surfacing: | (Optional) Firestone Acryli-Top (PC-100) to be applied at 1 gal/100 sq. ft. with an airless sprayer. If roller applied, two separate coats of 200 sq. ft. per gallon are required. |

Maximum Design Pressure:
-97.5 psf with Fiber Top cover board (See General Limitation #9)
-165 psf with Dens Deck cover board (See General Limitation #9)
-180 psf with Tapered ISO 95+ GL or without cover board (See General Limitation #9)

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, min. 200 psi Celcore or Mearlcrete |
| **System Type A(6):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer (Optional)** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Tapered ISO 95+ GL Minimum ½" thick start with a ¼ : 12 taper** | **N/A** | **N/A** |
| **Fiber Top Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck Minimum ¼" thick** | **N/A** | **N/A** |

**Note: 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. 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 used as a top layer shall be placed with the polyisocyanurate side facing down.**

| | |
|---|---|
| Membrane: | Fully adhere any RubberGard® EPDM membrane to the insulation with Firestone BA 2004 T Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces). |
| Surfacing: | (Optional) Firestone Acryli-Top (PC-100) to be applied at 1 gal/100 sq. ft. with an airless sprayer. If roller applied, two separate coats of 200 sq. ft. per gallon are required. |
| Maximum Design Pressure: | -97.5 psf with Fiber Top cover board (See General Limitation #9)<br>-165 psf with Dens Deck cover board (See General Limitation #9)<br>-195 psf with Tapered ISO 95+ GL or without cover board (See General Limitation #9) |

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, minimum 160 psi Elastizell |
| **System Type A(7):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with OlyBond 500 Adhesive in ¾" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer (Optional)** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Firestone FiberTop C Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck Minimum ¼" thick** | **N/A** | **N/A** |

**Note: Either top insulation layers shall be adhered with Firestone I.S.O. Twin Pack Insulation Adhesive applied in full coverage application or Dens Deck only shall be adhered with OlyBond 500 Adhesive in ¾" ribbons spaced 12" o.c. 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 boards used as a top layer shall be installed with the polyisocyanurate face down.**

| | |
|---|---|
| Membrane: | Firestone (Reinforced or Non-Reinforced) Standard RubberGard, Fire Retardant RubberGard, RubberGard LS-FR, RubberGard LS-FR PT, RubberGard MAX, RubberGard MAX PT, RubberGard MAX FR or RubberGard Platinum EPDM membrane fully adhered to the cover board with Firestone UltraPly Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces for a total of 120 sq. ft./gal). The roof cover side and end laps are sealed with Firestone RubberGard SA-1065 Splice Adhesive or QuickSeam Splice Tape. |
| Maximum Design Pressure: | -225 psf (See General Limitation #9) |

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, min. 200 psi Elastizell |
| **System Type A(8):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer (Optional)** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Firestone FiberTop C Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck Minimum ¼" thick** | **N/A** | **N/A** |

**Note: Either top insulation layers shall be adhered with Firestone I.S.O. Twin Pack Insulation Adhesive applied in full coverage application or Dens Deck only shall be adhered with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. 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 boards used as a top layer shall be installed with the polyisocyanurate face down.**

| | |
|---|---|
| Membrane: | Firestone (Reinforced or Non-Reinforced) Standard RubberGard, Fire Retardant RubberGard, RubberGard LS-FR, RubberGard LS-FR PT, RubberGard MAX, RubberGard MAX PT, RubberGard MAX FR or RubberGard Platinum EPDM membrane fully adhered to the cover board with Firestone UltraPly Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces for a total of 120 sq. ft./gal). The roof cover side and end laps are sealed with Firestone RubberGard SA-1065 Splice Adhesive or QuickSeam Splice Tape. |
| Maximum Design Pressure: | -180 psf (See General Limitation #9) |

| | |
|---|---|
| **Membrane Type:** | Single Ply, EPDM, Reinforced, Nonreinforced |
| **Deck Type 4I:** | Lightweight Concrete, Insulated |
| **Deck Description:** | Lightweight Insulating Concrete, min. 200 psi Celcore |
| **System Type A(9):** | One or more layers of insulation adhered with approved adhesive; membrane fully adhered. |

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer (Optional)** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Firestone FiberTop C Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck Minimum ¼" thick** | **N/A** | **N/A** |

**Note: Either top insulation layers shall be adhered with Firestone I.S.O. Twin Pack Insulation Adhesive applied in full coverage application or Dens Deck only shall be adhered with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. 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 boards used as a top layer shall be installed with the polyisocyanurate face down.**

| | |
|---|---|
| Membrane: | Firestone (Reinforced or Non-Reinforced) Standard RubberGard, Fire Retardant RubberGard, RubberGard LS-FR, RubberGard LS-FR PT, RubberGard MAX, RubberGard MAX PT, RubberGard MAX FR or RubberGard Platinum EPDM membrane fully adhered to the cover board with Firestone UltraPly Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces for a total of 120 sq. ft./gal). The roof cover side and end laps are sealed with Firestone RubberGard SA-1065 Splice Adhesive or QuickSeam Splice Tape. |
| Maximum Design Pressure: | -222.5 psf (See General Limitation #9) |

**Membrane Type:** Single Ply, EPDM, Reinforced, Nonreinforced

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

**Deck Description:** Lightweight Insulating Concrete, min. 200 psi Mearlcrete

**System Type A(10):** One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

**All General and System Limitations apply.**

One or more layers of the following insulations:

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ISO 95+ GL Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Insulation shall be adhered to the deck with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| **Top Insulation Layer (Optional)** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Firestone FiberTop C Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck Minimum ¼" thick** | **N/A** | **N/A** |

**Note: Either top insulation layers shall be adhered with Firestone I.S.O. Twin Pack Insulation Adhesive applied in full coverage application or Dens Deck only shall be adhered with Tite-Set Insulation Adhesive applied in 2½-3½" ribbons spaced 12" o.c. 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 boards used as a top layer shall be installed with the polyisocyanurate face down.**

Membrane: Firestone (Reinforced or Non-Reinforced) Standard RubberGard, Fire Retardant RubberGard, RubberGard LS-FR, RubberGard LS-FR PT, RubberGard MAX, RubberGard MAX PT, RubberGard MAX FR or RubberGard Platinum EPDM membrane fully adhered to the cover board with Firestone UltraPly Bonding Adhesive at a rate of 60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces for a total of 120 sq. ft./gal). The roof cover side and end laps are sealed with Firestone RubberGard SA-1065 Splice Adhesive or QuickSeam Splice Tape.

Maximum Design Pressure: -240 psf (See General Limitation #9)

## 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 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 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered 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 250 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 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 and/or RAS 137. 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.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9B-72 of the Florida Administrative Code.

# END OF THIS ACCEPTANCE