MIAMI-DADE COUNTY

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)

**Carlisle SynTec, Inc.**
**1285 Ritner Highway**
**Carlisle, PA 17013**

## 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, including the High Velocity Hurricane Zone.

**DESCRIPTION: Carlisle Single Ply EPDM Roof Systems over Recover 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 renews and revises NOA No. 04-0809.02 and consists of pages 1 through 16.
The submitted documentation was reviewed by Jorge L. Acebo

## ROOFING SYSTEM APPROVAL

| | |
|---|---|
| Category: | Roofing |
| Sub-Category: | Single Ply |
| Material: | EPDM |
| Deck Type: | Recover |
| Maximum Design Pressure | See specific deck type |
| Fire Classification: | See General Limitation #1 |

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

**TABLE 1**

| Product Name | Dimensions | Test Specifications | Product Description |
|---|---|---|---|
| Sure-Seal EPDM | various | ASTM D 4637 | Non-reinforced EPDM membrane. |
| Sure-Seal FR EPDM<br>Sure Seal FR-Plus EPDM | various | ASTM D 4637 | Non-reinforced, fire retardant EPDM membrane. |
| Sure-Seal Reinforced EPDM<br>Sure-Seal Sure-Tough | various | ASTM D 4637 | Reinforced EPDM membrane. |
| Sure-Seal Reinforced FR EPDM | various | ASTM D 4637 | Reinforced, fire retardant EPDM membrane. |
| Sure-Seal Fleece BACK<br>Sure Seal Fleece BACK AFX<br>Sure Seal Fleece BACK AFX-Plus | various | ASTM D 4637 | EPDM membrane with fleece backing. |
| Sure-White EPDM | various | ASTM D 4637 | Non-reinforced white on black EPDM membrane. |
| Sure-White Fleece BACK EPDM | Various | ASTM D4637 | Non-reinforced white on black fleece backed EPDM membrane. |
| RUSS | various | ASTM D 4637 | Reinforced securement strip. |
| CCW 702 Primer | various | TAS 110 | Solvent-Based Primer |
| CCW 702LT Primer | various | TAS 110 | Low-Temperature Solvent-Based Primer |
| CCW 714 Primer | various | TAS 110 | Water-Based Primer |
| CCW 725 Vapor Barrier | various | TAS 110 | Vapor Barrier |
| FAST 100 Adhesive<br>FAST 100-LV Adhesive<br>FAST 100-P Adhesive<br>OlyBond 500 BA<br>FAST 102 Adhesive | various | TAS 110 | Spray Polyurethane Adhesive |
| Sure-White Lap Sealant<br>Sure-Seal Lap Sealant | | TAS 110 | Lap Sealant for EPDM membranes. |
| Sure-White Splicing Cement<br>Sure Seal EP-95 Splicing Cement | | TAS 110 | Splicing Adhesive for EPDM membranes. |

| Product Name | Dimensions | Test Specifications | Product Description |
|---|---|---|---|
| SecurTape | | TAS 110 | Tape Adhesive for EPDM membranes. |
| Sure-Seal 90-8-30A Bonding Adhesive | | TAS 110 | Solvent-based bonding adhesive. |
| Sure-Seal B-500 Bonding Adhesive | | TAS 110 | Water-based bonding adhesive. |
| Sure-Seal Metal Fastening Bars, ST Fastening Bars | 1" wide | | Metal bars used for membrane securement. |
| Aqua Base 120 Bonding Adhesive | | TAS 110 | Water-based Bonding adhesive. |
| Cold Applied Adhesive | | TAS 110 | Asphalt-modified polyether adhesive. |

## APPROVED INSULATIONS:

**TABLE 2**

| Product Name | Product Description | Manufacturer (With Current NOA) |
|---|---|---|
| ACFoam Composite | Isocyanurate Insulation with perlite facer | Atlas Roofing Corp. |
| ACFoam II, III | Isocyanurate Insulation | Atlas Roofing Corp. |
| Polyisocyanurate HP, HP-N, HP-H, HP-W | Polyisocyanurate roof insulation. | Carlisle SynTec, Inc. |
| Sure-Seal HP Recovery Board | High Density Wood Fiberboard. | Carlisle SynTec, Inc. |
| EPS/Fiberboard | High Density Wood Fiberboard bonded to EPS. | Carlisle SynTec, Inc. |
| EPS Insulation | Expanded Polystyrene. | Carlisle SynTec, Inc. |
| Carlisle Foamular ½" Board | Extruded Polystyrene recovery board. | Carlisle SynTec, Inc. |
| Hytherm, Hytherm AP | Isocyanurate Insulation | Dow Chemical |
| Styrofoam | Extruded Polystyrene. | Dow Chemical |
| ISO 95+ GL, 95+ GW | Polyisocyanurate foam insulation | Firestone |
| Dens Deck, Dens Deck Prime | Silicon treated gypsum | G-P Products |
| Sturdi-Top | Wood fiber insulation board. | G-P Products |
| High Density Wood Fiberboard | High Density Wood Fiber insulation board. | Generic |
| Perlite Insulation Board | Perlite Insulation | Generic |
| Type X Gypsum, Gypsum | Gypsum Wallboard | Generic |
| EPS or XPS Insulation | Expanded or Extruded Polystyrene. | Generic |
| Ultra/M-II | Isocyanurate Insulation | Homasote Co. |

## APPROVED INSULATIONS:

TABLE 2

| Product Name | Product Description | Manufacturer (With Current NOA) |
|---|---|---|
| H-Shield | Isocyanurate Insulation | Hunter Panels |
| ENRGY 2, ENERGY 3, PSI-25 | Isocyanurate Insulation | Johns Manville |
| Foamular, Thermapink, Durapink | Extruded Polystyrene. | Owens Corning |
| Strataguard | Gypsum Wallboard | Owens Corning |
| Green Guard | Extruded Polystyrene insulation | Pactiv |
| Multi-Max, Multi-Max FA | Polyisocyanurate foam insulation | Rmax, Inc. |
| Fiber Base | Asphalt coated wood fiber insulation | Temple Inland Forest Products Corp. |
| Structodeck | High Density Wood Fiber insulation board. | Mosonites |

## APPROVED FASTENERS:

TABLE 3

| Fastener Number | Product Name | Product Description | Dimensions | Manufacturer (With Current NOA) |
|---|---|---|---|---|
| 1. | Sure-Seal HP, HP-X, HP-Xtra Fasteners, Sure-Tite, Sure-FAST | Insulation and membrane fastener | Various | Carlisle SynTec, Inc. |
| 2. | Sure-Seal HP Concrete Spikes, HD 14-10, CD-10 | Insulation and membrane fastener | Various | Carlisle SynTec, Inc. |
| 3. | Sure-Seal ASAP | Pre-assembled fastener & plate for insulation and membrane | Various | Carlisle SynTec, Inc. |
| 4. | Sure-Seal Seam Fastening Plates | Metal plates for membrane securement. | | Carlisle SynTec, Inc. |
| 5. | Sure-Seal HP Lightweight Fasteners | Fastener for cementitious and gypsum decks | Various | Carlisle SynTec, Inc. |
| 6. | Sure-Seal Lightweight Insulation Plates | Metal plates used for insulation securement. | 3" dia | Carlisle SynTec, Inc. |
| 7. | Sure-Seal Insulation Plates | Metal plates used for insulation securement. | $2\text{-}^{7}/_{8}$" | Carlisle SynTec, Inc. |
| 8. | Sure-Seal Polymer Seam Plates | Plastic plates used for membrane securement. | 2" dia | Carlisle SynTec, Inc. |
| 9. | Piranha, Piranha Xtra Plates | Plates used for membrane securement. | $2\text{-}^{3}/_{8}$" dia | Carlisle SynTec, Inc. |

## APPROVED FASTENERS:

TABLE 3

| Fastener Number | Product Name | Product Description | Dimensions | Manufacturer (With Current NOA) |
|---|---|---|---|---|
| 10. | #14 Roofgrip | Insulation and membrane fastener | Various | ITW Buildex |
| 11. | Metal Plate | Galvalume AZ50 stress plate | 3" square | ITW Buildex |
| 12. | Plastic Plate | Polyethylene stress plate | 3.2" round | ITW Buildex |
| 13. | Olympic Fasteners #12 and #14 | Insulation and membrane fastener | Various | Olympic Mfg. Group |
| 14. | Olympic Stainless Fasteners #14 | Stainless steel insulation and membrane fastener | Various | Olympic Mfg. Group |
| 15. | Strap Toggle | Fastener for steel, wood, CWF and gypsum decks. | Various | Olympic Mfg. Group |
| 16. | Iron-Lok Toggle | Fastener for steel, wood, CWF and gypsum decks. | Various | Olympic Mfg. Group |
| 17. | Olympic ASAP | Pre-assembled fastener & plate for insulation and membrane | Various | Olympic Mfg. Group |
| 18. | Lite Deck Fastener | Fastener for CWF and Gypsum decks | Various | Olympic Mfg. Group |
| 19. | Lite-Deck Plate | Galvalume AZ55 stress plate | 3" round | Olympic Mfg. Group |
| 20. | NTB Plate | Galvalume AZ55 stress plate | 3" round | Olympic Mfg. Group |
| 21. | NTB Metal Barbed Stress Plate | Galvalume AZ55 stress plate | 2" round | Olympic Mfg. Group |
| 22. | NTB Plastic Plate | Plastic plates for NTB 2" head fasteners. | 3" round | Olympic Mfg. Group |
| 23. | Olympic Standard | Galvalume AZ55 stress plate | 3" round | Olympic Mfg. Group |
| 24. | Olympic Plastic, ASAP | Plastic plates for fasteners. | 3" round | Olympic Mfg. Group |
| 25. | Rawl Fasteners #14 | Fastener for steel and wood decks | Various | Powers Fasteners Inc. |
| 26. | Rawl Drive | Fastener for concrete decks | | Powers Fasteners Inc. |
| 27. | Rawl Spike | Fastener for concrete decks | | Powers Fasteners Inc. |
| 28. | Rawl Speed-Lock Toggle Bolt | Insulation fastener assembly | | Powers Fasteners Inc. |
| 29. | Powerlite | Insulation fastener for cementitious and gypsum decks. | | Powers Fasteners Inc. |
| 30. | Powerlite | Galvalume AZ55 stress plate | 3" round | Powers Fasteners Inc. |

## APPROVED FASTENERS:

TABLE 3

| Fastener Number | Product Name | Product Description | Dimensions | Manufacturer (With Current NOA) |
|---|---|---|---|---|
| 31. | Rawl Insulation Plate | Galvalume AZ55 stress plate | 3" round | Powers Fasteners Inc. |
| 32. | Insul-Fixx Fastener | Insulation fastener for steel and wood decks | Various | SFS Intec, Inc. |
| 33. | Isofast Fasteners | Insulation fastener for steel and wood decks | Various | SFS Intec, Inc. |
| 34. | Insul-Fixx S | Galvalume AZ55 stress plate | 3" round | SFS Intec, Inc. |
| 35. | Insul-Fixx P | Polyethylene stress plate | 3" round | SFS Intec, Inc. |
| 36. | Isofast Plate | Square or oblong Galvalume steel plates for use with Isofast fasteners | | SFS Intec, Inc. |
| 37. | Dekfast Fasteners #14, #15 | Insulation and membrane fastener | Various | SFS Intec, Inc. |
| 38. | Dekfast Hex Plate | Insulation plate. | Various | SFS Intec, Inc. |
| 39. | Tru-Fast Fasteners | Insulation and membrane fastener | Various | The Tru-Fast Corp. |
| 40. | Tru-Fast Ultra Stainless Fasteners | Stainless steel insulation and membrane fastener | Various | The Tru-Fast Corp. |
| 41. | Tru-Fast MP-3 | Galvalume AZ50 steel plate | 3" round | The Tru-Fast Corp. |
| 42. | Tru-Fast Plastic Plate | Polyethylene stress plate | 3" round | The Tru-Fast Corp. |

## EVIDENCE SUBMITTED:

| Test Agency | Test Identifier | Description | Date |
|---|---|---|---|
| Factory Mutual Research Corp. | J.I. 4D9A6.AM | Approval Report | 08/03/98 |
| | 3003326 | Class 4470 | 04/12/99 |
| | 3000348 | Class 4470 | 04/19/99 |
| | 3012458 | Class 4470 | 02/23/02 |
| | 3016162 | Class 4470 | 10/25/03 |
| | 3009502 | Class 4470 | 12/21/00 |
| | 3024994 | Class 4450 | 02/28/06 |
| | 3013584 | Class 4470 | 06/27/03 |
| | 3019897 | Class 4470 | 10/07/05 |
| | 3022187 | Class 4470 | 09/15/05 |
| | 3022181 | Class 4470 | 09/01/05 |
| | 3014692 | Class 4470 | 08/05/03 |
| | 3020353 | Class 4470 | 03/25/04 |
| Underwriters Laboratories, Inc. | 02NK46936 | UL 790 | 12/15/03 |

## APPROVED ASSEMBLIES

**Membrane Type:** Single Ply, Thermoset, EPDM, Fleece Backed

**Deck Type 7I:** Recover

**Deck Description:** Concrete/lightweight concrete/cementitious wood fiber/wood/steel/gypsum

**System Type A(1):** One or more layers of insulation adhered with approved asphalt or FAST or OlyBond 500 BA Adhesive. Membrane fully adhered.

**All General and System Limitations apply.**

| Insulation Layer | Insulation Fasteners (Table 3) | Fastener Density/ft$^2$ |
|---|---|---|
| **Multi-Max FA, WHITELINE, Hytherm AP, Ultra/M-II Iso/glas, ENRGY-2, ENRGY-3, PSI-25, AC Foam II or III, Polyisocyanurate HP, HP-W, HP-H, HP-N, ISO 95+GL, HF, Rhoflex GL, HF** | | |
| **Minimum 1.5" thick** | **N/A** | **N/A** |

**Note: Existing roof 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$^2$ or OlyBond 500 BA or FAST Adhesive at minimum rate 1 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

Vapor Retarder: None.

Barrier: None

Membrane: Sure-Seal or Sure-White FleeceBACK 100 or 115 mil membrane fully adhered to the insulation using FAST Adhesive applied to the substrate at a rate of 1 gal./sq., or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft$^2$.

Or

Sure-Seal or Sure-White 45 to 90 mil membrane fully adhered to the insulation using 90-8-30 applied to the substrate at a rate of 1 gal/60ft.$^2$, or B-500 applied to the substrate at 1 gal/sq.

Or

Sure-Seal FleeceBack AFX or AFX Plus membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or Cold Applied Adhesive applied to the substrate at a rate of 1 gal/67 ft$^2$.

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft$^2$ and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat.

Maximum Design Pressure:

-330 psf (See General Limitation #9) with Fast Adhesive or asphalt only.

-562.5 psf (See General Limitation #9) (For FleeceBACK membranes) with Fast Adhesive or asphalt only.

-60 psf (See General Limitation #9) (For FleeceBACK AFX or AFX-Plus membranes with Cold Applied Adhesive) with Fast Adhesive or asphalt only.

-45 psf (See General Limitation #9) (For FleeceBACK 100 or 115 mil membranes with Aqua Base 120 Bonding Adhesive) with Fast Adhesive or asphalt only.

-150 psf (See General Limitation #9) (For All Membranes) with OlyBond 500 BA

**Membrane Type:** Single Ply, Thermoset, EPDM, Fleece Backed

**Deck Type 7I:** Recover

**Deck Description:** Concrete/lightweight concrete/cementitious wood fiber/wood/steel/gypsum

**System Type A(2):** One or more layers of insulation adhered with FAST Adhesive or OlyBond 500 BA Adhesive. Membrane fully adhered.

**All General and System Limitations apply.**

One or more layers of the following.

| Insulation Layer | Insulation Fasteners (Table 3) | Fastener Density/ft$^2$ |
|---|---|---|
| **Multi-Max FA, WHITELINE, Hytherm AP, Ultra/M-II Iso/glas, ENRGY-2, ENRGY-3, PSI-25, AC Foam II or III, Polyisocyanurate HP, HP-W, HP-H, HP-N, ISO 95+GL, HF, Rhoflex GL, HF, Extruded or Expanded Polystyrene** | | |
| **Minimum 1" thick** | **N/A** | **N/A** |
| **Dens Deck, Dens Deck Prime, Strataguard** | | |
| **Minimum ¼" thick** | **N/A** | **N/A** |
| **HP Recovery, Wood Fiber** | | |
| **Minimum ½" thick** | **N/A** | **N/A** |

**Note: Existing roof 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 existing roof with OlyBond 500 BA or FAST Adhesive at minimum rate 1 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

Vapor Retarder: None.

Barrier: None.

Membrane: Sure-Seal or Sure-White FleeceBACK 100 or 115 mil membrane fully adhered to the insulation using FAST Adhesive applied to the substrate at a rate of 1 gal./sq or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft$^2$.

Sure-Seal or Sure-White 45 to 90 mil membrane fully adhered to the insulation using 90-8-30 applied to the substrate at a rate of 1 gal/60ft.$^2$, or B-500 applied to the substrate at 1 gal/sq.

Sure-Seal FleeceBack AFX or AFX Plus membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq , or Cold Applied Adhesive applied to the substrate at a rate of 1 gal/67 ft$^2$.

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft$^2$ and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat.

Maximum Design Pressure:

-420 psf (For Extruded Polystyrene) (See General Limitation #9) with Fast Adhesive.

-322.5 psf (For Expanded Polystyrene) (See General Limitation #9) with Fast Adhesive

-120 psf (For Expanded Polystyrene) (See General Limitation #9) with OlyBond 500 BA

-120 psf (For Extruded Polystyrene with woodfiber or gypsum cover board) (See General Limitation #9) with OlyBond 500 BA

**Membrane Type:** Single Ply, Thermoset, EPDM, Reinforced, Nonreinforced, FleeceBACKED.

**Deck Type 7I:** Recover

**Deck Description:** Concrete/lightweight concrete/cementitious wood fiber/wood/steel/gypsum

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

**All General and System Limitations apply.**

| Base Insulation Layer | Insulation Fasteners (Table 3) | Fastener Density/ft$^2$ |
|---|---|---|
| **One of the following covered with the boards listed in Top Layer or Base or Top Layer.** | | |
| **Extruded or Expanded Polystyrene** | | |
| **Minimum 1" thick** | **N/A** | **N/A** |
| **Perlite** | | |
| **Minimum ¾" thick** | **N/A** | **N/A** |

**Note: All layers shall be simultaneously fastened; see top or base 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. Single and multiple layers of insulation can be adhered with any FAST Adhesive in a full coverage application. Please refer to Roofing Application Standard RAS 117 for insulation attachment.**

| Base or Top Insulation Layer | Insulation Fasteners (Table 3) | Fastener Density/ft$^2$ |
|---|---|---|
| **Multi-Max FA, Hytherm AP, Ultra/M-II Iso/glas** | | |
| **Minimum 1.2" thick** | **Approved Fastener for Deck Type** | **1:2 ft$^2$** |
| **ENRGY-2, ENRGY-3, PSI-25, AC Foam II, AC Foam III, H-Shield, Polyisocyanurate HP, Polyisocyanurate HP-W, HP-H, Polyisocyanurate HP-N** | | |
| **Minimum 1.5" thick** | **Approved Fastener for Deck Type** | **1:2 ft$^2$** |
| **Minimum 2" thick** | **Approved Fastener for Deck Type** | **1:4 ft$^2$** |
| **ACFoam Composite, Rhoflex Composite, Fesco Foam** | | |
| **Minimum 1.5" thick** | **Approved Fastener for Deck Type** | **1:3 ft$^2$** |
| **High Density Fiberboard** | | |
| **Minimum ¾" thick** | **Approved Fastener for Deck Type** | **1:2.67 ft$^2$** |
| **ISO 95+GL, HF, Rhoflex GL, HF** | | |
| **Minimum 1.2" thick** | **Approved Fastener for Deck Type** | **1:2 ft$^2$** |
| **Minimum 1.4" thick** | **Approved Fastener for Deck Type** | **1:3 ft$^2$** |
| **Structodeck, Fiber Base, HP Recovery, Wood Fiber** | | |
| **Minimum ½" thick** | **Approved Fastener for Deck Type** | **1:2 ft$^2$** |
| **Dens Deck, Dens Deck Prime, Strataguard** | | |
| **Minimum ¼"thick** | **Approved Fastener for Deck Type** | **1:2 ft$^2$** |

| Top Insulation Layer | Insulation Fasteners (Table 3) | Fastener Density/ft$^2$ |
|---|---|---|

**Required over the insulations listed in Base Layer or optional over any of the insulations listed as Base or Top Layer:**

**HP Recovery** (for use over all insulation. types) **Fiber Base** (for use over polyisocyanurate, gypsum or perlite)

**Minimum ½" thick** **Approved Fastener for Deck Type 1:2 ft²**

| | |
|---|---|
| Vapor Retarder: | (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation. |
| Barrier: | None. |
| Membrane #1: | Sure-Seal or Sure-White 45 to 90 mil membrane fully adhered to the insulation using 90-8-30A applied to the substrate at a rate of 1 gal/60 ft.², or B-500 applied to the substrate at 1 gal./sq.<br>***Maximum Design Pressure –45 psf (See General Limitation #9)*** |
| Membrane #2: | Sure-Seal or Sure-White FleeceBACK 100 or 115 mil membrane fully adhered to the insulation using FAST Adhesive applied to the substrate at a rate of 1 gal/sq or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft².<br>***Maximum Design Pressure –60 psf. (See General Limitation #7)*** |
| Membrane #3 | Sure-Seal FleeceBack AFX or AFX Plus membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq , or Cold Applied Adhesive applied to the substrate at a rate of 1 gal/67 ft².<br>***Maximum Design Pressure – 60 psf. (See General Limitation #7).*** |
| Surfacing: | (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft² and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat. |
| Maximum Design Pressure: | See Membrane Options Above |

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

**Deck Type 7I:** Recover

**Deck Description:** Steel/concrete (See Deck Type noted below)

**System Type D(1):** Membrane mechanically attached over preliminarily fastened insulation.

**All General and System Limitations apply.**

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **One of the following covered with the boards listed in Top Layer or Base or Top Layer.** | | |
| **Extruded or Expanded Polystyrene**<br>**Minimum 1" thick** | **N/A** | **N/A** |
| **Perlite**<br>**Minimum ¾" thick** | **N/A** | **N/A** |

| **Base or Top Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ENRGY-2, ENRGY-3, PSI-25, H-Shield, AC Foam II, AC Foam III, Polyisocyanurate HP, HP-W, HP-H, Polyisocyanurate HP-N, Multi-Max FA, Hytherm AP, Ultra/M-II Iso/glas, ISO 95+ HF, Rhoflex HF, ISO 95+GL, GW, Rhoflex GL, GW, UltraGard Gold, Isolite E, ACFoam Composite, Rhoflex Composite, Fesco Foam**<br>**Minimum 1" thick** | **N/A** | **N/A** |
| **HP Recovery, Structodeck, Fiber Base, High Density Fiberboard**<br>**Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck, Dens Deck Prime, Strataguard**<br>**Minimum ¼" thick** | **N/A** | **N/A** |

| **Top Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Required over the insulations listed in Base Layer or optional over any of the insulations listed as Base or Top Layer:**<br>**HP Recovery** (for use over all insulation. types) **Fiber Base** (for use over polyisocyanurate, gypsum or perlite)<br>**Minimum ½" thick** | **N/A** | **N/A** |

**Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Single and multiple layers of insulation can be attached with any FAST Adhesive or with OlyBond 500 BA.**

Vapor Retarder: (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.

Barrier: None.

| | |
|---|---|
| Membrane: | Sure-Seal Reinforced, FR Reinforced or Sure-Tough secured through the preliminarily attached insulation as specified below. |
| Deck: | Structural Concrete Deck or Minimum 22 gage ASTM A653 Grade C Steel deck fastened to steel support at a maximum span of 6 feet o.c. Steel deck shall be fastened with minimum ITW Buildex Traxx/5 at a maximum spacing of 6 inches o.c. Side laps shall be fastened with Traxx/1 at a maximum spacing of 24 inches o.c. |
| Fastening #1: | Sure-Seal Metal Fastening Bars with Sure-Seal HP.X or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 12" o.c. installed through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 6'-6" o.c.<br>***Maximum Design Pressure –45 psf (See General Limitation #7)*** |
| Fastening #2: | Sure-Seal Metal Fastening Bars with Sure-Seal HP.X or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 6" o.c. installed through the reinforced lap or through a RUSS strip in rows spaced maximum 9'-6" o.c.<br>***Maximum Design Pressure –52.5 psf (See General Limitation #7)*** |
| Fastening #3: | Sure-Seal HP or concrete Fasteners with Polymer Plates spaced 6" o.c. through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 9'-6" o.c.<br>***Maximum Design Pressure -45 psf. (See General Limitation #7)*** |
| Fastening #4: | Sure-Seal HP or concrete Fasteners with Polymer Plates spaced 6" o.c. through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 6'-6" o.c.<br>***Maximum Design Pressure –52.5 psf. (See General Limitation #7)*** |
| Fastening #5: | Sure-Seal Metal Fastening Bars with Sure-Seal HP.X or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 6" o.c. installed through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 6'-6" o.c.<br>***Maximum Design Pressure –67.5 psf (See General Limitation #7)*** |
| Fastening #6: | Sure-Seal HP or concrete Fasteners with Polymer Plates 6" o.c. installed through the Sure-Tough Membrane in rows spaced maximum 9'-6" o.c.<br>***Maximum Design Pressure -52.5 psf. (See General Limitation #7)*** |
| Surfacing: | (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 $ft^2$ and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat. |
| Maximum Design Pressure: | See Fastening Options Above |

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

**Deck Type 7I:** Recover

**Deck Description:** Steel/concrete (See Deck Type noted below)

**System Type D(2):** Membrane mechanically attached over preliminarily fastened insulation.

**All General and System Limitations apply.**

| **Base Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **One of the following covered with the boards listed in Top Layer or Base or Top Layer.** | | |
| **Extruded or Expanded Polystyrene** | | |
| **Minimum 1" thick** | **N/A** | **N/A** |
| **Perlite** | | |
| **Minimum ¾" thick** | **N/A** | **N/A** |

| **Base or Top Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **ENRGY-2, ENRGY-3, PSI-25, H-Shield, AC Foam II, AC Foam III, Polyisocyanurate HP, HP-W, HP-H, Polyisocyanurate HP-N, Multi-Max FA, Hytherm AP, Ultra/M-II Iso/glas, ISO 95+ HF, Rhoflex HF, ISO 95+GL, GW, Rhoflex GL, GW, UltraGard Gold, Isolite E, ACFoam Composite, Rhoflex Composite, Fesco Foam** | | |
| **Minimum 1" thick** | **N/A** | **N/A** |
| **HP Recovery, Structodeck, Fiber Base, High Density Fiberboard** | | |
| **Minimum ½" thick** | **N/A** | **N/A** |
| **Dens Deck, Dens Deck Prime, Strataguard** | | |
| **Minimum ¼" thick** | **N/A** | **N/A** |

| **Top Insulation Layer** | **Insulation Fasteners (Table 3)** | **Fastener Density/ft$^2$** |
|---|---|---|
| **Required over the insulations listed in Base Layer or optional over any of the insulations listed as Base or Top Layer:** | | |
| **HP Recovery** (for use over all insulation. types) **Fiber Base** (for use over polyisocyanurate, gypsum or perlite) | | |
| **Minimum ½" thick** | **N/A** | **N/A** |

**Note: All layers of insulation and membrane shall be simultaneously attached. See membrane below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Single and multiple layers of insulation can be attached with any FAST Adhesive or with OlyBond 500 BA.**

Vapor Retarder: (Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.

Barrier: None.

| | |
|---|---|
| Membrane: | Sure-Seal Reinforced, FR Reinforced or Sure-Tough secured through the preliminarily attached insulation as specified below. |
| Deck: | Structural Concrete Deck or Minimum 22 gage ASTM A653 Grade E Type B Steel deck fastened to steel support at a maximum span of 6 feet o.c. Steel deck shall be fastened with minimum ITW Buildex Traxx/5 at a maximum spacing of 6 inches o.c. Side laps shall be fastened with Traxx/1 at a maximum spacing of 30 inches o.c. |
| Fastening #1: | ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 12" o.c. installed through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 9'-6" o.c. ***Maximum Design Pressure –45 psf (See General Limitation #7)*** |
| Fastening #2: | Sure-Seal Metal Fastening Bars with Sure-Seal HP-X or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 6" o.c., installed through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 9'-6" o.c.<br>***Maximum Design Pressure –60 psf (See General Limitation #7)*** |
| Fastening #3: | Sure-Seal Metal Fastening Bars with Sure-Seal HP-X or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 6" o.c., installed through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 6'-6" o.c.<br>***Maximum Design Pressure –75 psf (See General Limitation #7)*** |
| Fastening #4: | Sure-Seal HP or concrete fasteners and Polymer Plates 6" o.c. installed through the reinforced membrane in the lap or through a RUSS strip in rows spaced maximum 9'-6" o.c.<br>***Maximum Design Pressure –52.5 psf. (See General Limitation #7)*** |
| Fastening #5: | Sure-Seal HP or concrete Fasteners and Polymer Plates spaced 6" o.c. installed through the Sure-Tough Membrane in rows spaced maximum 9'-6" o.c.<br>***Maximum Design Pressure –60 psf (See General Limitation #7)*** |
| Surfacing: | (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 $ft^2$ and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat. |
| Maximum Design Pressure: | See Fastening Options Above |

**Membrane Type:** Single Ply, Thermoplastic, FleeceBACK

**Deck Type 7:** Recover

**Deck Description:** Concrete/lightweight concrete/cementitious wood fiber/gypsum/wood/steel

**System Type F:** Membrane fully adhered.

**All General and System Limitations apply.**

Vapor Retarder: None.

Barrier: None.

Membrane: Sure-Seal or Sure-White 45 to 90 mil membrane fully adhered to the existing roof using 90-8-30 applied to the substrate at a rate of 1 gal/60ft.$^2$, or B-500 applied to the substrate at 1 gal/sq

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft$^2$ and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat.

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

**Deck Type 7:** Recover

**Deck Description:** Concrete/lightweight concrete/cementitious wood fiber/gypsum/wood/steel

**System Type F(2):** Membrane fully adhered.

**All General and System Limitations apply.**

Vapor Retarder: None.

Barrier: None.

Membrane: Sure-Seal or Sure-White FleeceBACK 100 or 115 mil membrane fully adhered to the existing roof using FAST Adhesive applied to the substrate at a rate of 1 gal./sq or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft$^2$.
Or
Sure-Seal FleeceBACK AFX or AFX Plus membrane adhered to the existing roof in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq , or Cold Applied Adhesive applied to the substrate at a rate of 1 gal/67 ft$^2$.

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft$^2$ and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat.

Maximum Design Pressure:
-585 psf. (See General Limitation #9) (For FleeceBACK membranes adhered with FAST Adhesive or Asphalt)
-60 psf. (See General Limitation #9) (For FleeceBACK AFX or AFX-Plus membranes adhered with Cold Applied Adhesive)

## RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

## 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 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. 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.)**
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