



MIAMI-DADE COUNTY, FLORIDA  
METRO-DADE FLAGLER BUILDING

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

**PRODUCT CONTROL NOTICE OF ACCEPTANCE**

**G S Roofing Products Company, Inc.**  
**5525 MacArthur Blvd., Suite #900**  
**Irving TX 75015**

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

**CONTRACTOR ENFORCEMENT SECTION**  
(305) 375-2966 FAX (305) 375-2908

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

Your application for Product Approval of:

***Conventional BUR Roofing Systems Over Structural Concrete Decks.***

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This approval shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at anytime from a jobsite or manufacturer's plant for quality control testing.

If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

**Acceptance No.: 99-1213.09**

**Expires: 05/19/2003**

Raul Rodriguez  
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL CONDITIONS**

**BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.  
Director

Miami-Dade County  
Building Code Compliance Office

**Approved: 05/19/2000**

1 of 19



**ROOFING ASSEMBLY APPROVAL**

Applicant:

**GS Roofing Products Company, Inc. d/b/a CertainTeed**  
 P.O. Box 860  
 Valley Forge, PA 19482

Product Control No.: 99-1213.09

Approval Date: May 19, 2000

Expiration Date: May 19, 2003

Category:

Roofing

Sub-Category:

BUR

Deck Type:

Concrete

Maximum Design Pressure:

-355 psf.

Fire Classification:

See General Limitation #1

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

| <u>Product</u>                           | <u>Dimensions</u>                               | <u>Test Specification</u>                  | <u>Product Description</u>   |
|--|---|--|--|
| All Weather/Empire Base Sheet            | 36" x 72'; Roll weight: 86 lbs. (2 squares)     | ASTM D 2626<br>UL Type 15                  | Asphalt coated, organic base sheet.  |
| Flintglas® Mineral Surfaced Cap Sheet    | 36" X 36'; 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® Ply Sheet Type IV or VI       | 36" x 180'; Roll weight: 40/55 lbs. (5 squares) | ASTM D 2178<br>Type IV or VI<br>UL Type G1 | Fiberglass, asphalt impregnated ply sheet.   |
| Flex-I-Glas or Flex-I-Glas FR Base Sheet | 36" x 108'; Roll weight: 90 lbs. (3 squares)    | ASTM D 5147                                | SBS Modified, fiberglass reinforced base sheet.  |
| GlasBase™ Base Sheet                     | 36" x 108'; Roll weight: 69 lbs. (3 squares)    | ASTM D 4601<br>UL Type G2                  | Asphalt coated, fiberglass base sheet.   |
| No. 15 Perforated Felt                   | 36" x 144', Roll weight: 90 lbs. (4 square)     | ASTM D 226                                 | Organic asphalt saturated felt.  |
| Yosemite® Mineral Surfaced Cap Sheet     | 36" x 36'; Roll weight: 90 lbs. (1 square)      | ASTM D 249<br>UL Type 30                   | Mineral Surfaced organic cap and buffer sheet.   |



**TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:**

| <u>Product</u>               | <u>Dimensions</u> | <u>Test Specification</u> | <u>Product Description</u>   | <u>Manufacturer</u>                             |
|------------------------------|-------------------|---------------------------|--|---|
| ACFoam II                    | various           | PA 110                    | Polyisocyanurate foam insulation   | Atlas Energy Products<br>(with current NOA)     |
| E'NRG'Y-2 or PSI-25          | various           | PA 110                    | Polyisocyanurate foam insulation   | NRG Barriers, Inc.<br>(with current NOA)        |
| ISORoc                       | various           | PA 110                    | Polyisocyanurate foam and rockwool composite insulation                              | NRG Barriers, Inc.<br>(with current NOA)        |
| E'NRG'Y-2 Plus               | various           | PA 110                    | Polyisocyanurate foam / wood fiberboard composite insulation                         | NRG Barriers, Inc.<br>(with current NOA)        |
| Multi-Max                    | various           | PA 110                    | Polyisocyanurate foam insulation.  | RMAX<br>(with current NOA)                      |
| Hy-Therm AP                  | various           | PA 110                    | Polyisocyanurate foam insulation   | Celotex Corp.<br>(with current NOA)             |
| UltraGard Gold               | various           | PA 110                    | Polyisocyanurate foam insulation   | Johns Manville<br>(with current NOA)            |
| Pyrox                        | various           | PA 110                    | Polyisocyanurate foam insulation   | Apache<br>(with current NOA)                    |
| ISO 95+                      | various           | PA 110                    | Polyisocyanurate foam insulation   | Firestone<br>(with current NOA)                 |
| High Density Fiberboard      | various           | PA 100                    | Wood fiber insulation  | Celotex Corp.<br>(with current NOA)             |
| High Density Wood Fiberboard | various           | PA 110                    | Wood fiber insulation board  | with current NOA                                |
| Fiberglas                    | various           | PA 110                    | Fiber glass roof insulation  | Johns Manville<br>(with current NOA)            |
| Paroc Cap Board              | various           | PA 110                    | Rockwool insulation  | Partek, Inc.<br>(with current NOA)              |
| Perlite Insulation           | various           | PA 110                    | Perlite insulation board   | generic   |
| Dens Deck                    | various           | PA 110                    | Gypsum core / fiberglass faced coverboard  | Georgia Pacific<br>(with current NOA)           |
| N.T.B. Magnum                |                   | PA 114                    | Glass reinforced nylon fastener for use in gypsum and cementitious wood fiber decks. | Olympic<br>(with current NOA)                   |
| N.T.B. Spin Weld Plate       | 2" round          | PA 114                    | 2" round amorphorus nylon locking plate for use with N.T.B. fasteners with 1" head   | Olympic<br>(with current NOA)                   |
| N.T.B. Plastic Plate         | 3" round          | PA 114                    | 3" round polypropylene stress plate for use with N.T.B. fasteners                    | Olympic<br>(with current NOA)                   |
| N.T.B. Plate                 |                   | PA 114                    | 3" round galvalume AZ55 plate for use with N.T.B. fasteners                          | Olympic<br>(with current NOA)                   |
| Lite-Deck Fastener and Plate |                   | PA 114                    | Fastener and plate for insulation attachment to cementitious wood fiber or gypsum.   | Olympic<br>(with current NOA)                   |
| Rawlite                      |                   | PA 114                    | Insulation fastener for cementitious and gypsum decks                                | The Rawlplug Company Inc.<br>(with current NOA) |

| <u>Product</u>                                | <u>Dimensions</u>                      | <u>Test Specification</u>                  | <u>Product Description</u>  | <u>Manufacturer</u>   |
|---|--|--|---|---|
| Rawlite 3" Plate                              | 3" round                               | PA 114                                     | 3" round galvalume AZ55 steel plate for use with Rawlite fasteners  | The Rawlplug Company Inc.<br>(with current NOA)             |
| Polymer Gyptec                                |  | PA 114                                     | Nylon fastener for insulation attachment to cementitious wood fiber decks.  | ITW Buildex<br>(with current NOA)                           |
| TPR   |  | PA 114                                     | Rivet fastener for cementitious wood fiber decks.   | SFS Stadler<br>(with current NOA)                           |
| Asphalt Emulsion                              |  | PA 121                                     | Asphalt emulsion  | Gardner<br>(with current NOA)                               |
| Gardner Cold Process Roof Cement Asphalt      | 1, 5, 55 gallons                       | ASTM D 3019 Type III<br>ASTM D 312         | Fibered asphaltic general purpose lap and ply cement. Type III or IV hot asphalt bitumen adhesive                                 | Gardner<br>(with current NOA)<br>generic                    |
| Asphalt Primer                                |  | ASTM D 41                                  | Asphalt Primer  | generic   |
| Chopped fiberglass emulsion                   |  | ASTM D 1227                                | Roof Coating  | generic   |
| Fiberglas Flashing Cement                     |  | PA 110<br>ASTM D 4586<br>or<br>ASTM D 2822 | Fiber glass roof insulation<br>A trowel-grade, cutback bitumen cement mixture including inorganic fibers and mineral stabilizers. | with current NOA<br>generic                                 |
| Modified Cold Process Cement                  |  | ASTM D 3019 Type III                       | Adhesive  | generic   |
| Modified Plastic Roof Cement                  |  | ASTM D4586 Type I                          | Flashing Cement   | generic   |
| Non Fibered Aluminum Coating                  |  | ASTM D 2824                                | Roof Coating  | generic   |
| Static Asphalt Fibered Emulsion               |  | ASTM D 1227                                | Roof Coating  | generic   |
| al MB aluminum roof coating                   |  | PA 121                                     | Aluminum roof coating   | Grundy Industries<br>(with current NOA)                     |
| Karnak 97, 97AF or 169                        |  | PA 121                                     | Roof coating  | Karnak<br>(with current NOA)                                |
| Prograde Fibered Aluminum                     |  | PA 121                                     | Fibrated aluminum roof coating.   | Monsey Products Co.<br>(with current NOA)                   |
| # 2100 - Modified All Weather Flashing Cement | 1, 5, 55 gallons, or 10.5 ounce tubes. | ASTM D 3019 (Type III) and D 3409          | Rubberized all-weather flashing cement, trowel grade, modified adhesive.  | Tropical Asphalt Products Corporation<br>(with current NOA) |
| Aluma-Brite No. 120                           |  | PA 121                                     | Fibrated aluminum roof coating.   | Tropical Asphalt Products Corp.<br>(with current NOA)       |
| APOC 212                                      |  | PA 121                                     | Aluminum roof coating.  | APOC, Subsidiary of Gardner<br>(with current NOA)           |
| Sunbright 400                                 |  | PA 121                                     | Roof coating  | APOC, Subsidiary of Gardner<br>(with current NOA)           |
| MBA   |  | ASTM 3019 Type III                         | Asphalt based cold applied adhesive.  | APOC, Subsidiary of Gardner<br>(with current NOA)           |



**EVIDENCE SUBMITTED**

| <u>Test Agency/Identifier</u>       | <u>Name</u>                               | <u>Report</u>  | <u>Date</u> |
|-------------------------------------|---|----------------|-------------|
| Applied Research Laboratories       | Physical Properties                       | 28013          | 06/02/87    |
| Factory Mutual Research Corporation | Current Insulation Fastening Requirements | FMRC 1996      | 01/01/96    |
| Factory Mutual Research Corporation | PA 114 (FMRC 4470)                        | J.I. #3Y8A1.AM | 03/23/96    |
| Underwriters Laboratories, Inc.     | Fire Classification Compliance            | R11656         | 07/13/87    |
| United States Testing Company, Inc. | ASTM D 5147                               | 97457-4        | 06/03/88    |
| United States Testing Company       | ASTM D 5147                               | 97-457-2R      | 12/02/87    |



**APPROVED ASSEMBLIES:**

- Membrane Type:** BUR
- Deck Type 3I:** Concrete Decks, Insulated, New Construction
- Deck Description:** 2500 psi structural concrete or concrete plank
- System Type A-1:** Anchor sheet (optional), base sheet and/or insulation adhered with approved asphalt.

All General and System Limitations apply.

| <u>Insulation<br/>Base or Top Layers</u>                     | <u>Fastener<br/>Type</u> | <u>Fastening<br/>Detail No.<br/>(see PA 117)</u> | <u>Fasteners<br/>Per Board</u> | <u>Fastener<br/>Density</u> |
|--|--------------------------|--|--------------------------------|-----------------------------|
| one or more layers of any of the following insulations:      |                          |  |                                |                             |
| Approved Type(s): <b>ACFoam I, E'NRG'Y-2, E'NRG'Y-2 Plus</b> |                          |  |                                |                             |
| Minimum: 1" x 4' x 4'  | N/A                      | N/A  | N/A                            | N/A                         |
| Approved Type(s): <b>ISORoc</b>                              |                          |  |                                |                             |
| Minimum: 1" x 4' x 4'  | N/A                      | N/A  | N/A                            | N/A                         |
| Approved Type(s): <b>Multi-Max</b>                           |                          |  |                                |                             |
| Minimum: 1" x 4' x 4'  | N/A                      | N/A  | N/A                            | N/A                         |
| Approved Type(s): <b>Paroc</b>                               |                          |  |                                |                             |
| Minimum: 3/4" x 4' x 4'                                      | N/A                      | N/A  | N/A                            | N/A                         |
| Approved Type(s): <b>Fiberglas</b>                           |                          |  |                                |                             |
| Minimum: 1 5/16" x 4' x 4'                                   | N/A                      | N/A  | N/A                            | N/A                         |
| Approved Type(s): <b>Perlite</b>                             |                          |  |                                |                             |
| Minimum: 3/4" x 2' x 4'                                      | N/A                      | N/A  | N/A                            | N/A                         |
| Approved Type(s): <b>High Density Wood Fiberboard</b>        |                          |  |                                |                             |
| Minimum: 1/2" x 4' x 4'                                      | N/A                      | N/A  | N/A                            | N/A                         |
| Approved Type(s): <b>Dens Deck</b>                           |                          |  |                                |                             |
| Minimum: 1/4" x 4' x 4'                                      | N/A                      | N/A  | N/A                            | N/A                         |

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

- Anchor Sheet:** (Optional) One ply of All Weather/Empire, Flex-I-Glas, Flex-I-Glas FR or GlasBase base sheet in a spot mopping of approved asphalt, 12" diameter circles, 24" o.c. at a rate of 12 lbs./sq.. (See General Limitation #4)
- 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 25 lbs./sq. ± 15%. (See General Limitation #4)
- Ply Sheet:** Two, three, four or five 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 25 lbs./sq. ± 15%.
- Cap Sheet:** (Optional) One ply of FlintGlas Mineral Surface cap sheet adhered in a full mopping of approved asphalt at an application rate of 25 lbs./sq. ± 15%.
- Surfacing:** (Required if no cap sheet is used) Install one of the following:

1. 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..
2. Flood coat of approved Type III asphalt with an application rate of 60 lbs./sq.; plus gravel or slag at an application rate of 400 lbs./sq. or 300 lbs./sq. respectively.

Maximum Design  
Pressure:

-87.5 psf (See General Limitations # 4 & 9)

Maximum Fire  
Classification:

See General Limitation # 1.

Maximum Slope:

See General Limitation # 1.

7   
Frank Zuloaga, RRC Product Control Examiner

**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated, New Construction  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type A-2:** Anchor sheet (optional), base sheet and/or insulation adhered with approved asphalt.

All General and System Limitations apply.

| <u>Insulation Base Layers</u>                           | <u>Fastener Type</u> | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|----------------------|---|----------------------------|-------------------------|
| one or more layers of any of the following insulations: |                      |   |                            |                         |
| Approved Type(s): ACFoam I, E'NRG'Y-2, E'NRG'Y-2 Plus   |                      |   |                            |                         |
| Minimum: 1" x 4' x 4'                                   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): ISORoc                                |                      |   |                            |                         |
| Minimum: 1" x 4' x 4'                                   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): Multi-Max                             |                      |   |                            |                         |
| Minimum: 1" x 4' x 4'                                   | N/A                  | N/A   | N/A                        | N/A                     |
| <u>Insulation Top Layer Required</u>                    | <u>Fastener Type</u> | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
| Approved Type(s): Celotex High Density Wood Fiber Board |                      |   |                            |                         |
| Minimum: ¾" x 4' x 4'                                   | N/A                  | N/A   | N/A                        | N/A                     |

**Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full moppings of approved asphalt within the EVT range and at a rate of 20-40 lbs. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a required second layer of approved top layer insulation installed as the final membrane substrate.**

**Base Sheet:** One or more plies of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the composite insulation with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Ply Sheet:** One or more plies of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Cap Sheet:** (Optional) One ply of FlintGlas Mineral Surface cap sheet adhered in a full mopping of approved asphalt at an application rate of 25 lbs./sq. ± 15%.

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

1. 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..
2. Flood coat of approved Type III asphalt with an application rate of 60 lbs./sq.; plus gravel or slag at an application rate of 400 lbs./sq. or 300 lbs./sq. respectively.

**Maximum Design Pressure:** -227.5 psf (See General Limitations #9)

**Maximum Fire Classification:** See General Limitation # 1.

**Maximum Slope:** See General Limitation # 1.

8   
 Frank Zuloaga, RRC Product Control Examiner

**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated, New Construction  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type A-3:** Anchor sheet (optional), base sheet and/or insulation adhered with approved asphalt.

All General and System Limitations apply.

| <u>Insulation Base Layers</u>                                | <u>Fastener Type</u> | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|--|----------------------|---|----------------------------|-------------------------|
| one or more layers of any of the following insulations:      |                      |   |                            |                         |
| Approved Type(s): <b>ACFoam I, E'NRG'Y-2, E'NRG'Y-2 Plus</b> |                      |   |                            |                         |
| Minimum: 1" x 4' x 4'  | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>ISORoc</b>                              |                      |   |                            |                         |
| Minimum: 1" x 4' x 4'  | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>Multi-Max</b>                           |                      |   |                            |                         |
| Minimum: 1" x 4' x 4'  | N/A                  | N/A   | N/A                        | N/A                     |
| <u>Insulation Top Layer Required</u>                         | <u>Fastener Type</u> | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
| Approved Type(s): <b>Dens Deck</b>                           |                      |   |                            |                         |
| Minimum: ¼" x 4' x 4'  | N/A                  | N/A   | N/A                        | N/A                     |

**Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full moppings of approved asphalt within the EVT range and at a rate of 20-40 lbs. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a required second layer of approved top layer insulation installed as the final membrane substrate.**

**Base Sheet:** One or more plies of GS Glas Base, GS Flex-I Glas Base, Flex-I Glas FR Base, GS Poly SMS, Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the composite insulation with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Ply Sheet:** One or more plies of GS Glas Base, GS Flex-I-Glas Base, Flex-I-Glas FR Base, GS PolySMS or one or more plies of Flintglas Ply Sheet (Type IV) or Flintglas Premium Ply Sheet (Type VI) adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Cap Sheet:** (Optional) One ply of FlintGlas Mineral Surface cap sheet adhered in a full mopping of approved asphalt at an application rate of 25 lbs./sq. ± 15%.

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

1. 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..
2. Flood coat of approved Type III asphalt with an application rate of 60 lbs./sq.; plus gravel or slag at an application rate of 400 lbs./sq. or 300 lbs./sq. respectively.

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

**Maximum Fire Classification:** See General Limitation # 1.

**Maximum Slope:** See General Limitation # 1.

9   
 Frank Zuloaga, RRC Product Control Examiner

- Membrane Type:** BUR
- Deck Type 3I:** Concrete Decks, Insulated, New Construction
- Deck Description:** 2500 psi structural concrete or concrete plank
- System Type A-4:** Anchor sheet (optional), base sheet and/or insulation adhered with approved asphalt.

All General and System Limitations apply.

| <u>Insulation<br/>Base Layers</u> | <u>Fastener<br/>Type</u> | <u>Fastening<br/>Detail No.</u><br>(see PA 117) | <u>Fasteners<br/>Per Board</u> | <u>Fastener<br/>Density</u> |
|-----------------------------------|--------------------------|---|--------------------------------|-----------------------------|
|-----------------------------------|--------------------------|---|--------------------------------|-----------------------------|

one or more layers of any of the following insulations:

Approved Type(s): E'NRG'Y-2, E'NRG'Y-2 Composite

|                         |     |     |     |     |
|-------------------------|-----|-----|-----|-----|
| Minimum: 1.5" x 4' x 4' | N/A | N/A | N/A | N/A |
|-------------------------|-----|-----|-----|-----|

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

**Base Sheet:** One or more plies of All Weather/Empire, Flex-I-Glas or GlasBase base sheet adhered to the fiberglass insulation with approved mopping asphalt applied within the EVT range and at a rate of 20-40 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 to the base sheet with approved mopping asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Cap Sheet:** (Optional) One ply of FlintGlas Mineral Surface cap sheet adhered in a full mopping of approved asphalt at an application rate of 25 lbs./sq. ± 15%.

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

1. 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..
2. Flood coat of approved Type III asphalt with an application rate of 60 lbs./sq.; plus gravel or slag at an application rate of 400 lbs./sq. or 300 lbs./sq. respectively.

**Maximum Design Pressure:** -355 psf (See General Limitations # 9)

**Maximum Fire Classification:** See General Limitation # 1.

**Maximum Slope:** See General Limitation # 1.

  
 10 \_\_\_\_\_  
 Frank Zuloaga, RRC Product Control Examiner

**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated, New Construction  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type B:** Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

**All General Limitations shall apply.**

| <u>Insulation Base Layer</u>  | <u>Fastener Type</u>            | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|---------------------------------|---|----------------------------|-------------------------|
| one or more layers of any of the following insulations under those listed as Top Layer: |                                 |   |                            |                         |
| <b>Approved Type(s): Hy-Therm AP, Pyrox, White Line</b>                                 |                                 |   |                            |                         |
| Minimum: 1.3" x 4' x 4'   | Dekfast #14, #15, DekSpike      | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'   | HD Insulfixx                    | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'   | Olympic #14, CD-10, Fluted Nail | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'   | Anchorbond #14, #15             | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'   | Tru-Fast S                      | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| <b>Approved Type(s): E'NRG'Y 2</b>  |                                 |   |                            |                         |
| Minimum: 1.4" x 4' x 4'   | DekFast #14, #15, DekSpike      | [2]   | 4                          | 1:3 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'   | Olympic #14, CD-10, Fluted Nail | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'   | Anchorbond #14, #15             | [2]   | 4                          | 1:3 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'   | Rawl Drive/Spike                | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| <b>Approved Type(s): ISORoc</b>   |                                 |   |                            |                         |
| Minimum: 1.5" x 4' x 4'   | DekFast #14, #15, DekSpike      | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.5" x 4' x 4'   | Olympic #14, CD-10, Fluted Nail | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.5" x 4' x 4'   | Rawl Drive/Spike S              | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.5" x 4' x 4'   | Anchorbond #14, #15             | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.5" x 4' x 4'   | Rawl Drive/Spike S              | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| <b>Approved Type(s): E'NRG'Y 2 Plus</b>   |                                 |   |                            |                         |
| Minimum: 1.5" x 4' x 4'   | DekFast #14, #15, DekSpike      | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'   | HD Insulfixx S/P                | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'   | Olympic #14, CD-10, Fluted Nail | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'   | Rawl Drive/Spike S              | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'   | Tru-Fast S/P                    | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'   | Anchorbond #14, #15             | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| <b>Approved Type(s): Iso 95 +</b>   |                                 |   |                            |                         |
| Minimum: 1.4" x 4' x 4'   | HD Insulfixx S/P                | [2]   | 4                          | 1:3 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'   | Tru-Fast S/P                    | [2]   | 4                          | 1:3 ft <sup>2</sup>     |

| <u>Insulation Base Layer</u>                          | <u>Fastener Type</u>            | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|---------------------------------|---|----------------------------|-------------------------|
| Minimum: 1.4" x 4' x 4'                               | Olympic #14, CD-10, Fluted Nail | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Approved Type(s): <b>Multi-Max</b>                    |                                 |   |                            |                         |
| Minimum: 1.5" x 4' x 8'                               | DekFast #14, #15, DekSpike      | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | Anchorbond #14, #15             | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | HD Insulfixx S/P                | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | Olympic #14, CD-10, Fluted Nail | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | Rawl Drive/Spike S              | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Approved Type(s): <b>UltraGard Gold</b>               |                                 |   |                            |                         |
| Minimum: 1.3" x 4' x 4'                               | DekFast #14, #15, DekSpike      | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'                               | Tru-Fast S/P                    | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Approved Type(s): <b>Perlite</b>                      |                                 |   |                            |                         |
| Minimum: ¾" x 2' x 4'                                 | DekFast #14, #15, DekSpike      | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | Anchorbond #14, #15             | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | #14-10, #15 Roofgrip S          | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | HD Insulfixx S                  | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | Tru-Fast S/P                    | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Approved Type(s): <b>High Density Wood Fiberboard</b> |                                 |   |                            |                         |
| Minimum: ½" x 4' x 8'                                 | DekFast #14, #15, DekSpike S    | [4]   | 16                         | 1:2 ft <sup>2</sup>     |
| Minimum: ½" x 4' x 8'                                 | Anchorbond, #14, #15 S/P        | [4]   | 16                         | 1:2 ft <sup>2</sup>     |
| Minimum: ½" x 4' x 8'                                 | #14-10, #15 Roofgrip S          | [4]   | 16                         | 1:2 ft <sup>2</sup>     |
| Minimum: ½" x 4' x 8'                                 | Tru-Fast S/P                    | [4]   | 16                         | 1:2 ft <sup>2</sup>     |
| Approved Type(s): <b>Fiberglas</b>                    |                                 |   |                            |                         |
| Minimum: 15/16" x 4' x 4'                             | DekFast #14, #15, DekSpike      | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 15/16" x 4' x 4'                             | Anchorbond #14, #15 S/P         | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 15/16" x 4' x 4'                             | #14-10, #15 Roof Grip S/P       | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 15/16" x 4' x 4'                             | HD Insulfixx S/P                | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 15/16" x 4' x 4'                             | Tru-Fast S/P                    | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 15/16" x 4' x 4'                             | Olympic #14, Cd-10, Fluted Nail | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |

**Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Miami-Dade County Roofing Application Standard RAS 117 for fastening details).**

| <u>Insulation Optional Top Layer</u> | <u>Fastener Type</u> | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|--------------------------------------|----------------------|---|----------------------------|-------------------------|
|--------------------------------------|----------------------|---|----------------------------|-------------------------|

one or more layers of any of the following insulations

12   
 Frank Zuloaga, RRC Product Control Examiner

Approved Type(s): Any of the insulations listed for Base Layer, above.

Minimum: see Base Layer N/A N/A N/A N/A

Approved Type(s): Paroc

Minimum: 3/4" x 4' x 4' N/A N/A N/A N/A

Approved Type(s): Dens-Deck

Minimum: 1/4" x 4' x 8' N/A N/A N/A N/A

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

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 25 lbs./sq. ± 15%. (See General Limitation #4)

Ply Sheet: Two, three, four or five 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 25 lbs./sq. ± 15%.

Cap Sheet: (Optional) One ply of FlintGlas Mineral Surface cap sheet adhered in a full mopping of approved asphalt at an application rate of 25 lbs./sq. ± 15%.

Surfacing: (Required if no cap sheet is used) Install one of the following:
1. 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..
2. Flood coat of approved Type III asphalt with an application rate of 60 lbs./sq.; plus gravel or slag at an application rate of 400 lbs./sq. or 300 lbs./sq. respectively.

Maximum Design Pressure: -52.5 psf (See General Limitation #9)

Maximum Fire Classification: See General Limitation # 1.

Maximum Slope: See General Limitation # 1.

**Membrane Type:** BUR  
**Deck Type 3I:** Concrete Decks, Insulated, New Construction  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type C:** All layers of insulation simultaneously fastened.

All General Limitations shall apply.

| <u>Insulation (Optional) Base Layer</u>   | <u>Fastener Type</u> | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|----------------------|---|----------------------------|-------------------------|
| one or more layers of any of the following insulations under those listed as Top Layer: |                      |   |                            |                         |
| Approved Type(s): <b>AC-Foam II</b>   |                      |   |                            |                         |
| Minimum: 1.3" x 4' x 4'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>E'NRG'Y 2</b>  |                      |   |                            |                         |
| Minimum: 1.4" x 4' x 4'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>ISORoc</b>   |                      |   |                            |                         |
| Minimum: 1.5" x 4' x 4'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>E'NRG'Y-2 Plus</b>   |                      |   |                            |                         |
| Minimum: 1.5" x 4' x 4'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>Multi-Max</b>  |                      |   |                            |                         |
| Minimum: 1" x 4' x 8'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>High Density Wood Fiber</b>  |                      |   |                            |                         |
| Minimum: 1/2" x 4' x 4'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>Paroc</b>  |                      |   |                            |                         |
| Minimum: 3/4" x 4' x 4'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>Perlite</b>  |                      |   |                            |                         |
| Minimum: 3/4" x 2' x 4'   | N/A                  | N/A   | N/A                        | N/A                     |
| Approved Type(s): <b>Fiberglas</b>  |                      |   |                            |                         |
| Minimum: 1 5/16" x 4' x 4'  | N/A                  | N/A   | N/A                        | N/A                     |

Note: All layers shall be simultaneously attached; see top layer below for fasteners and density.

| <u>Insulation Top Layer</u>                                   | <u>Fastener Type</u>              | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|-----------------------------------|---|----------------------------|-------------------------|
| one or more layers of any of the following insulations        |                                   |   |                            |                         |
| Approved Type(s): <b>Apache/Hy-Therm Pyrox, AP, WhiteLine</b> |                                   |   |                            |                         |
| Minimum: 1.3" x 4' x 4'                                       | DekFast #14, #15<br>DekSpike S/P  | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'                                       | HD Insulfixx S/P                  | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'                                       | Olympic #14, CD-10, Fluted Nail   | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'                                       | Anchorbond #14, #15 S/P           | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'                                       | Tru-Fast S                        | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Approved Type(s): <b>E'NRG'Y 2</b>                            |                                   |   |                            |                         |
| Minimum: 1.4" x 4' x 4'                                       | DekFast #14, #15,<br>DekSpike S/P | [2]   | 4                          | 1:3 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'                                       | Olympic #14, CD-10, Fluted Nail   | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'                                       | Anchorbond #14, #15 S             | [2]   | 4                          | 1:3 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'                                       | Rawl Drive/Spike                  | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Approved Type(s): <b>ISORoc</b>                               |                                   |   |                            |                         |

14   
 Frank Zuloaga, RRC Product Control Examiner

| <u>Insulation Top Layer</u>                           | <u>Fastener Type</u>            | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|---------------------------------|---|----------------------------|-------------------------|
| Minimum: 1.5" x 4' x 4'                               | DekFast #14, #15, DekSpike S    | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.5" x 4' x 4'                               | Olympic #14, CD-10, Fluted Nail | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.5" x 4' x 4'                               | Rawl Drive/Spike S              | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.5" x 4' x 4'                               | Anchorbond #14, #15 S           | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| <b>Approved Type(s): E'NRG'Y 2 Plus</b>               |                                 |   |                            |                         |
| Minimum: 1.5" x 4' x 4'                               | DekFast #14, #15, DekSpike S/P  | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'                               | HD Insulfixx S/P                | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'                               | Olympic #14, CD-10, Fluted Nail | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'                               | Rawl Drive/Spike S              | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'                               | Tru-Fast S/P                    | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| Minimum: 1.5" x 4' x 4'                               | Anchorbond #14, #15 S/P         | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| <b>Approved Type(s): Iso 95 +</b>                     |                                 |   |                            |                         |
| Minimum: 1.4" x 4' x 4'                               | HD Insulfixx S/P                | [2]   | 4                          | 1:3 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'                               | Tru-Fast S/P                    | [2]   | 4                          | 1:3 ft <sup>2</sup>     |
| Minimum: 1.4" x 4' x 4'                               | Olympic #14, CD-10, Fluted Nail | [2]   | 3                          | 1:4 ft <sup>2</sup>     |
| <b>Approved Type(s): Multi-Max</b>                    |                                 |   |                            |                         |
| Minimum: 1.5" x 4' x 8'                               | DekFast #14, #15, DekSpike S    | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | Anchorbond #14, #15 S           | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | HD Insulfixx S/P                | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | Olympic #14, CD-10, Fluted Nail | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| Minimum: 1.5" x 4' x 8'                               | Tru-Fast S                      | [4]   | 11                         | 1:2.9 ft <sup>2</sup>   |
| <b>Approved Type(s): UltraGard Gold</b>               |                                 |   |                            |                         |
| Minimum: 1.3" x 4' x 4'                               | DekFast #14, #15, DekSpike S    | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| Minimum: 1.3" x 4' x 4'                               | Tru-Fast S/P                    | [3]   | 6                          | 1:2.67 ft <sup>2</sup>  |
| <b>Approved Type(s): Perlite</b>                      |                                 |   |                            |                         |
| Minimum: ¾" x 2' x 4'                                 | DekFast #14, #15, DekSpike S    | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | Anchorbond #15 S/P              | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | #14-10 or #15 Roofgrip S        | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | #14 Insulfixx S                 | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| Minimum: ¾" x 2' x 4'                                 | Tru-Fast S/P                    | [1]   | 4                          | 1:2 ft <sup>2</sup>     |
| <b>Approved Type(s): High Density Wood Fiberboard</b> |                                 |   |                            |                         |
| Minimum: ½" x 4' x 8'                                 | DekFast #14, #15, DekSpike S    | [4]   | 16                         | 1:2 ft <sup>2</sup>     |
| Minimum: ½" x 4' x 8'                                 | Anchorbond #14, #15 S/P         | [4]   | 16                         | 1:2 ft <sup>2</sup>     |
| Minimum: ½" x 4' x 8'                                 | #14-10, #15 Roofgrip S          | [4]   | 16                         | 1:2 ft <sup>2</sup>     |

  
 Frank Zuloaga, RRC Product Control Examiner

| <u>Insulation Top Layer</u>                                 | <u>Fastener Type</u>                | <u>Fastening Detail No.</u><br>(see PA 117) | <u>Fasteners Per Board</u> | <u>Fastener Density</u> |
|---|-------------------------------------|---|----------------------------|-------------------------|
| Minimum: ½" x 4' x 8'<br>Approved Type(s): <b>Fiberglas</b> | Tru-Fast S/P                        | [4]   | 16                         | 1:2 ft²                 |
| Minimum: 15/16" x 4' x 4'                                   | DekFast #14, #15,<br>DekSpike S/P   | [3]   | 6                          | 1:2.67 ft²              |
| Minimum: 15/16" x 4' x 4'                                   | Anchorbond #14,<br>#15 S/P          | [3]   | 6                          | 1:2.67 ft²              |
| Minimum: 15/16" x 4' x 4'                                   | #14-10, #15Roof<br>Grip S/P         | [3]   | 6                          | 1:2.67 ft²              |
| Minimum: 15/16" x 4' x 4'                                   | HD Insulfixx S/P                    | [3]   | 6                          | 1:2.67 ft²              |
| Minimum: 15/16" x 4' x 4'                                   | Tru-Fast S/P                        | [3]   | 6                          | 1:2.67 ft²              |
| Minimum: 15/16" x 4' x 4'                                   | Olympic #14, CD-<br>10, Fluted Nail | [3]   | 6                          | 1:2.67 ft²              |

**Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Miami-Dade County Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in Chapter 23 of the S.F.B.C. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment.**

**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 25 lbs./sq. ± 15%. (See General Limitation #4)

**Ply Sheet:** Two, three, four or five 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 25 lbs./sq. ± 15%.

**Cap Sheet:** (Optional) One ply of FlintGlas Mineral Surface cap sheet adhered in a full mopping of approved asphalt at an application rate of 25 lbs./sq. ± 15%.

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

1. 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..
2. Flood coat of approved Type III asphalt with an application rate of 60 lbs./sq.; plus gravel or slag at an application rate of 400 lbs./sq. or 300 lbs./sq. respectively.

**Maximum Design Pressure:** -52.5 psf (See General Limitation #9)

**Maximum Fire Classification:** See General Limitation # 1.

**Maximum Slope:** See General Limitation # 1.

**Membrane Type:** BUR  
**Deck Type 3:** Concrete Decks, Non-insulated, New Construction  
**Deck Description:** 2500 psi structural concrete or concrete plank  
**System Type F:** Base sheet adhered with approved asphalt.

**All General Limitations shall apply.**

**Base Sheet:** Install one or more plies of All Weather/Empire, Flex-I-Glas or GlasBase base sheet directly to the concrete substrate. Adhere with any approved mopping asphalt at an application rate of 25 lbs./sq.  $\pm$  15% , or spot or strip mopped as detailed in this approval; see General Limitation #4

**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 25 lbs./sq.  $\pm$  15%.

**Cap Sheet:** (Optional) One ply of FlintGlas Mineral Surface cap sheet adhered in a full mopping of approved asphalt at an application rate of 25 lbs./sq.  $\pm$  15%.

**Surfacing:** (Required if no cap sheet is used) Install one of the following:  
1. 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..  
2. Flood coat of approved Type III asphalt with an application rate of 60 lbs./sq.; plus gravel or slag at an application rate of 400 lbs./sq. or 300 lbs./sq. respectively.

**Maximum Design Pressure:** -235 psf (See General Limitation #9)

**Maximum Fire Classification:** See General Limitation # 1.

**Maximum Slope:** See General Limitation # 1.



**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 or Architect may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Miami-Dade County Testing Application Standards TAS 105 and calculations in compliance with Miami-Dade Roofing Application Standard RAS 117.
- 7 Perimeter and corner areas shall comply with the enhanced uplift pressure of these areas, as calculated in compliance with Chapter 23 of the South Florida Building Code. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Miami-Dade County Roofing Application Standard RAS 117. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
- 8 All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Miami-Dade County Roofing Application Standard RAS 111 and the wind load requirements of Chapter 23 of the South Florida Building Code.
- 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.)**



GS Roofing Products Co., Inc. d/b/a CertainTeed  
P.O. Box 860  
Valley Forge 19482

ACCEPTANCE NO: 99-1213.09  
APPROVED: May 19, 2000  
EXPIRES: May 19, 2003

**NOTICE OF ACCEPTANCE STANDARD CONDITIONS**

- 1 Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.
- 2 Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
- 3 Renewals of Acceptance will not be considered if:
  - a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
  - b) The product is no longer the same product (identical) as the one originally approved;
  - c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
  - d) The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
- 4 Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
- 5 Any of the following shall also be grounds for removal of this Acceptance:
  - a) Unsatisfactory performance of this product or process;
  - b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
- 6 The Notice of Acceptance number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the Notice of Acceptance is displayed, then it shall be done in its entirety.
- 7 A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all times. The copies need not be resealed by the engineer.
- 8 Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
- 9 This Acceptance contains pages 1 through 19

**END OF THIS ACCEPTANCE**