



BUILDING CODE COMPLIANCE OFFICE
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CONTRACTOR ENFORCEMENT DIVISION
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PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Carlisle SynTec Incorporated
P. O. Box 7000
Carlisle, PA 17013

Your application for Notice of Acceptance (NOA) of:

Sure-Weld Single-Ply Roofing Membrane over Concrete Deck

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

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

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

Raul Rodriguez
Chief Product Control Division

ACCEPTANCE NO.: 00-0725.08
EXPIRES: 08/31/2003

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

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

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 08/31/2000

ROOFING SYSTEM APPROVAL

<u>Category:</u>	Roofing	Approval Date: <u>August 31, 2000</u>
<u>Sub-Category:</u>	Single Ply	Expiration Date: <u>August 31, 2003</u>
<u>Material:</u>	TPO	
<u>Deck Type:</u>	Concrete	
<u>Maximum Design Pressure</u>	-67.5 psf	
<u>Fire Classification:</u>	See General Limitation #1	

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Sure-Weld	various	PA 131	Reinforced white or colored TPO membrane.
Sure-Weld GSD	various	PA 131	Reinforced white or colored FR TPO membrane.
Carlisle Foamular Durapink Insulation	various	PA 110	Extruded Polystyrene for white or black mechanically fastened roof systems.
Carlisle Foamular 1/2" Board	various	PA 110	Extruded Polystyrene recovery board.
Carlisle Foamular 150, 250, 400, 404, 600	various	PA 110	Extruded Polystyrene insulation
CCW 702 Primer	various	PA 110	Solvent-Based Primer
CCW 702LT Primer	various	PA 110	Low-Temperature Solvent-Based Primer
CCW 714 Primer	various	PA 110	Water-Based Primer
CCW 725 Vapor Barrier	various	PA 110	40 mil Vapor Barrier
Fast 100 Adhesive	various	PA 110	Spray Polyurethane Adhesive
Fast 100-P Adhesive	various	PA 110	Spray Polyurethane Adhesive
Fast 102 Adhesive	various	PA 110	Spray Polyurethane Adhesive
Polyisocyanurate HP-H	various	PA 110	Polyisocyanurate roof insulation
Polyisocyanurate HP-W	various	PA 110	Polyisocyanurate roof insulation
Polyisocyanurate HP	various	PA 110	Polyisocyanurate roof insulation
Polyisocyanurate HP-N	various	PA 110	Polyisocyanurate roof insulation
Sure Seal EPS Insulation	various	PA 110	Expanded Polystyrene
Sure-Weld Bonding Adhesive	various	PA 110	Solvent-based bonding adhesive
Sure-Seal Insulation Plates	2 7/8" dia.	PA 114	Metal plates used for insulation securement.
Sure-Seal EPS/Fiberboard	various	PA 110	High Density Wood Fiberboard bonded to EPS.
Sure-Seal HP Recovery Board	various	PA 110	High Density Wood Fiberboard.
Sure-Seal HP Concrete Spikes	1/4" dia.	PA 114	Driven fasteners used for insulation and membrane securement in concrete decks.


 Frank Zuloaga, RRC
 Roofing Product Control Examiner

<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Sure-Seal Lightweight Insulation Plates	3" dia.	PA 114	Metal plates used for insulation securement with HP Lightweight Fasteners.
Sure-Seal HP Lightweight Fasteners	0.687 dia.	PA 114	Threaded plastic fasteners for insulation and membrane securement in lightweight deck materials.
Sure-Seal Lightweight Seam Plates	2" dia.	PA 114	Metal plates used for membrane securement with HP Lightweight Fasteners.
Sure-Seal HP Fasteners	#14	PA 114	Threaded fasteners used for insulation securement in steel, wood and concrete decks.
Sure-Seal HP-X Fasteners	#15	PA 114	Threaded fasteners used for insulation and membrane securement in steel, wood and concrete decks.

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
Hy Therm	various	PA 110	Polyisocyanurate foam insulation	Apache Products Co.
Pyrox	various	PA 110	Polyisocyanurate foam insulation	Apache Products Co.
White Line	various	PA 110	Polyisocyanurate foam insulation	Apache Products Co.
ACFoam II	various	PA 110	Polyisocyanurate foam insulation	Atlas Energy Products
Celcore		PA 110	Cellular insulating concrete system	Celcore, Inc.
Hy-Therm Stable R	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp.
Star AP	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp.
Star SP	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp.
Tristar	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp.
Dekfast Fasteners #12		PA 114	Insulation fastener for steel and wood decks.	Construction Fasteners Inc.
Dekfast Fasteners #14		PA 114	Insulation fastener for steel and concrete decks.	Construction Fasteners Inc.
Dekfast Fasteners #15		PA 114	Insulation fastener for steel and concrete.	Construction Fasteners, Inc.

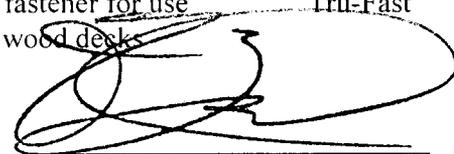

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 Roofing Product Control Examiner

<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
Dekfast Hex Plate	2 7/8" x 3 1/4"	PA 114	Galvalume hex stress plate.	Construction Fasteners Inc.
Styrofoam	2' x 8'	PA 110	Extruded polystyrene insulation	Dow
Elastizell		PA 110	Cellular insulating concrete system	Elastizell Corp.
ISO 95+ GL, 95+ GW		PA 110	Polyisocyanurate foam insulation	Firestone
Asphalt Primer		ASTM D 41	Asphalt Primer	generic
High Density Wood Fiberboard	various	PA 110	Wood fiber insulation board	generic
Oriented Strand Board	various	PA 110	Oriented strand insulation board.	generic
Perlite/Urethane Composite	various	PA 110	Perlite/urethane composite insulation board	generic
Sturdi-Top	various	PA 110	Wood fiber insulation board.	Georgia Pacific
Ultra/M-II	various	PA 110	Polyisocyanurate foam insulation	Homasote Co.
Insta-Stick	various	PA 110	Polyisocyanurate foam insulation	Insta-Foam
#12 Roofgrip		PA 114	Insulation fastener	ITW Buildex
#14 Roofgrip		PA 114	Insulation fastener	ITW Buildex
E'NERG'Y PSI-25	various	PA 110	Polyisocyanurate foam insulation	NRG Barriers, Inc.
E'NRG'Y-2	various	PA 110	Polyisocyanurate foam insulation	NRG Barriers, Inc.
CD-10 Fastener		PA 114	Insulation fastener	Olympic Manufacturing Group, Inc.
Con-Tite		PA 114	Concrete deck insulation fastener	Olympic Manufacturing Group, Inc.
Lite-Deck Fastener		PA 114	Insulation fastener	Olympic Manufacturing Group, Inc.
N.T.B. Magnum		PA 114	Glass reinforced nylon fastener for use in gypsum and cementitious wood fiber decks.	Olympic Manufacturing Group, Inc.
Olympic Fastener #14		PA 114	Insulation fastener	Olympic Manufacturing Group, Inc.



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<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
Olympic Fastener #12		PA 114	Insulation fastener	Olympic Manufacturing Group, Inc.
Multi-Max FA	various	PA 110	Polyisocyanurate foam insulation	RMAX
HD Insul-Fixx Fastener		PA 114	Insulation fastener for use in steel and concrete decks	SFS/Stadler
Insul-Fixx Fastener		PA 114	Insulation fastener for steel and wood decks	SFS/Stadler
Insul-Fixx S	3" square	PA 114	3" square galvalume AZ55 stress plate	SFS/Stadler
Insul-Fixx P	3" round	PA 114	3" round polyethylene stress plate	SFS/Stadler
Isofast Plate	various	PA 114	Square or oblong galvalume steel plates for use with Isofast fasteners	SFS/Stadler
Isofast Fasteners		PA 114	Insulation fastener for steel and wood decks	SFS/Stadler
Rawl Fasteners #14		PA 114	Insulation fastener for use in steel, wood or concrete	The Rawlplug Company Inc.
Rawl Drive		PA 114	Insulation fastener and steel and plastic stress plate for concrete deck	The Rawlplug Company Inc.
Rawl Fasteners #12		PA 114	Insulation fastener for steel and wood decks	The Rawlplug Company Inc.
Rawl Spike		PA 114	Insulation fastener and steel and plastic stress plate for concrete deck	The Rawlplug Company Inc.
Rawl Speed-Lock Toggle Bolt		PA 114	Insulation fastener assembly	The Rawlplug Company Inc.
Rawlite		PA 114	Insulation fastener for cementitious and gypsum decks	The Rawlplug Company Inc.
Tru-Fast CF Fasteners		PA 114	Insulation fastener for concrete decks	Tru-Fast
Tru-Fast Ultra		PA 114	Stainless Steel fastener for use in steel, wood and concrete decks	Tru-Fast
Tru-Fast Plastic Plate	3.04" round	PA 114	3.04" round polyethylene plastic plate	Tru-Fast
Tru-Fast DL		PA 114	Glass reinforced nylon fastener for use in tectum or gypsum decks	Tru-Fast
Tru-Fast TP		PA 114	Insulation fastener for use in steel or wood decks	Tru-Fast



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Roofing Product Control Examiner

<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
Tru-Fast HD		PA 114	Insulation fastener for use in wood, steel or concrete decks	Tru-Fast
Tru-Fast MP-3	3.23" round	PA 114	3.23" round galvalume AZ50 steel plate	Tru-Fast
Tru-Fast DP		PA 114	Insulation fastener for use in steel or wood decks	Tru-Fast
Insulcel		PA 110	Cellular insulating concrete system	W.R. Grace
Structodeck	various	PA 110	High Density Wood Fiber insulation board.	Wood Fiber Industries

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Architectural Testing Inc.	ATI-37050.01	Wind Uplift Classification	3/13/00
Architectural Testing Inc.	ATI-37490-01	Membrane Brittleness Testing	7/7/00
Factory Mutual Research Corporation	3003393	Wind Uplift Classification	3/30/99
Factory Mutual Research Corporation	3003393 (Letter Report)	Wind Uplift Classification	3/26/99
Factory Mutual Research Corporation	3001522	Wind Uplift Classification	3/26/99
Factory Mutual Research Corporation	3001522 (Letter Report)	Wind Uplift Classification	11/3/98
Factory Mutual Research Corporation	3Z9A1.AM	Wind Uplift and Fire Classification	10/15/97
Factory Mutual Research Corporation	Approval Guide Excerpt	Wind Uplift and Fire Listings	5/00
Celotex Corporation Testing Services	520257	Membrane Physical Property Testing	4/19/00
SGS U.S. Testing Company Incorporated	131248-R2	Membrane Ozone Testing	1/6/00



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Roofing Product Control Examiner

SYSTEMS:

- Membrane Type:** Single Ply, Thermoplastic, TPO, Reinforced
- Deck Type 3I:** Concrete Decks, Insulated, New Construction
- Deck Description:** 2500 psi structural concrete.
- System Type A-1:** One or more layers of insulation adhered with approved asphalt or with Fast Adhesive. Membrane fully adhered.

All General and System Limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One of the following covered with the boards listed in Top Layer or Base or Top Layer.

Approved Type(s): **Perlite**
 Minimum: ¾" x 2' x 4' N/A N/A N/A N/A

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of the following as a Base or Top Layer or over the Base Layer listed above:

Approved Type(s): **ACFoam II**
 Minimum: 1.5" x 3' x 4' N/A N/A N/A N/A

Approved Type(s): **E'NRG'Y-2, PSI-25**
 Minimum: 1.4" x 4' x 4' N/A N/A N/A N/A

Approved Type(s): **HP Recovery**
 Minimum: ½" x 4' x 4' N/A N/A N/A N/A

Approved Type(s): **High Density Fiberboard**
 Minimum: ¾" x 4' x 4' N/A N/A N/A N/A

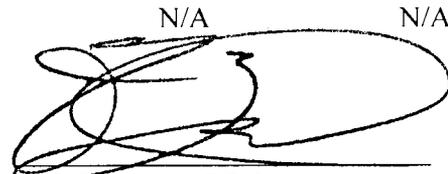
Approved Type(s): **PYROX, AP**
 Minimum: 1.2" x 4' x 4' N/A N/A N/A N/A

Approved Type(s): **ISO 95+ HF, Rhoflex HF**
 Minimum: 1.2" x 3' x 4' N/A N/A N/A N/A

Approved Type(s): **Multi-Max FA**
 Minimum: 1.2" x 3' x 4' N/A N/A N/A N/A

Approved Type(s): **ACFoam Composite, Rhoflex Composite, Fesco Foam**
 Minimum: 1.5" x 3' x 4' N/A N/A N/A N/A

Approved Type(s): **Polyisocyanurate HP-W**
 Minimum: 1.5" x 3' x 4' N/A N/A N/A N/A


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 Roofing Product Control Examiner

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Polyisocyanurate HP Minimum: 1.2" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Structodeck Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): UltraGard Gold Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A

Note: All insulation shall be adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation can be adhered to the deck with Fast Adhesive.

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

Barrier: None.

Membrane: Sure-Weld or Sure-Weld GSD, Reinforced, 45 or 60 mil membrane fully adhered to the insulation using Sure-Weld Bonding Adhesive applied to the substrate at a rate of 1 gal/60 ft².

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

Maximum Fire Classification: See General Limitation #1



Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced

Deck Type 3I: Concrete Decks, Insulated, New Construction

Deck Description: 2500 psi structural concrete.

System Type C: All layers of insulation simultaneously attached. Membrane fully adhered.

All General and System Limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One of the following covered with the boards listed in Top Layer or Base or Top Layer.

Approved Type(s): Extruded Polystyrene				
Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Energy-Lok, ACFoam - II				
Minimum: 1" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Perlite				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A

Note: All insulation layers shall be simultaneously fastened; see Top Layer or Base or Top Layer below for fasteners and density.

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of the following:

Approved Type(s): ACFoam II				
Minimum: 1.5" x 3' x 4'	Sure-Seal HP Fastener	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Rawl Spike	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Rawl Drive	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Carlisle Secure Spike	[2]	6	1:2 ft. ²
Minimum: 2" x 4' x 4'	Sure-Seal HP Fastener	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Insulfixx HD S	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	RoofGrip InstaLock	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Tru-Fast #14	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Olympic #14	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Dekfast #14, #15	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Rawl Spike	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Rawl Drive	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Carlisle Secure Spike	[3]	8	1:2 ft. ²



<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): E'NRG'Y-2, PSI-25				
Minimum: 1.4" x 4' x 4'	Insulfixx HP	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	RoofGrip #14	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Sure-Seal HP Fastener	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Dekfast #14, #15	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Olympic #14	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Rawl Spike	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Rawl Drive	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Carlisle Secure Spike	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Tru-Fast #14	[3]	8	1:2 ft. ²
Minimum: 2" x 4' x 4'	Insulfixx HP	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	RoofGrip #14	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	Sure-Seal HP Fastener	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	Dekfast #14, #15	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	Carlisle Secure Spike	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	Rawl Spike	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	Rawl Drive	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	Olympic #14	[3]	4	1:4 ft. ²
Minimum: 2" x 4' x 4'	Tru-Fast #14	[3]	4	1:4 ft. ²
Approved Type(s): HP Recovery				
Minimum: ½" x 4' x 4'	Sure-Seal HP Fastener	[3]	8	1:2 ft. ²
Minimum: ½" x 4' x 4'	Rawl Spike	[3]	8	1:2 ft. ²
Minimum: ½" x 4' x 4'	Rawl Drive	[3]	8	1:2 ft. ²
Minimum: ½" x 4' x 4'	Carlisle Secure Spike	[3]	8	1:2 ft. ²
Minimum: 1" x 4' x 4'	Sure-Seal HP Fastener	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Rawl Spike	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Rawl Drive	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Carlisle Secure Spike	[1]	4	1:2 ft. ²
Approved Type(s): High Density Fiberboard				
Minimum: ¾" x 4' x 4'	Dekfast # #14, #15	[3]	6	1:2.67 ft. ²
Minimum: ¾" x 4' x 4'	Olympic #14	[3]	6	1:2.67 ft. ²
Minimum: ¾" x 4' x 4'	Tru-Fast #14	[3]	6	1:2.67 ft. ²
Approved Type(s): WHITELINE, PYROX, AP				
Minimum: 1.4" x 4' x 4'	Insulfixx HD	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	RoofGrip #14	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Sure-Seal HP Fastener	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Dekfast #14, #15	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Rawl Spike	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Rawl Drive	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Carlisle Secure Spike	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Olympic #14	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Tru-Fast #14	[3]	8	1:2 ft. ²



<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): ISO 95+ HF, Rhoflex HF				
Minimum: 1.4" x 3' x 4'	Insulfixx HP	[2]	6	1:2 ft. ²
Minimum: 1.4" x 3' x 4'	Dekfast #14, #15	[2]	6	1:2 ft. ²
Approved Type(s): AC Foam Composite, Rhoflex Composite, Fesco Foam				
Minimum: 1.5" x 3' x 4'	Sure-Seal HP Fastener	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Rawl Spike	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Rawl Drive	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Carlisle Secure Spike	[2]	6	1:2 ft. ²
Approved Type(s): Polyisocyanurate HP-W				
Minimum: 1.5" x 3' x 4'	Sure-Seal HP Fastener	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Rawl Spike	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Rawl Drive	[2]	6	1:2 ft. ²
Minimum: 1.5" x 3' x 4'	Carlisle Secure Spike	[2]	6	1:2 ft. ²
Approved Type(s): Polyisocyanurate HP -W				
Minimum: 2" x 3' x 4'	Sure-Seal HP Fastener	[2]	4	1:4 ft. ²
Minimum: 2" x 3' x 4'	Rawl Spike	[2]	4	1:4 ft. ²
Minimum: 2" x 3' x 4'	Rawl Drive	[2]	4	1:4 ft. ²
Minimum: 2" x 3' x 4'	Carlisle Secure Spike	[2]	4	1:4 ft. ²
Approved Type(s): Polyisocyanurate HP				
Minimum: 1.4" x 4' x 4'	Insulfixx HD	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	RoofGrip #14	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Sure-Seal HP Fastener	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Dekfast #14, #15	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Rawl Spike	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Rawl Drive	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Carlisle Secure Spike	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Olympic #14	[3]	8	1:2 ft. ²
Minimum: 1.4" x 4' x 4'	Tru-Fast #14	[3]	8	1:2 ft. ²
Approved Type(s): Sturdi Top				
Minimum: ½" x 4' x 4'	Dekfast #14, #15	[3]	8	1:8 ft. ²
Minimum: ½" x 4' x 4'	Olympic #14	[3]	8	1:8 ft. ²
Approved Type(s): Ultra/M-II Iso/glas				
Minimum: 1.2" x 3' x 4'	Insulfixx HD S	[2]	6	1:2 ft. ²
Minimum: 1.2" x 3' x 4'	RoofGrip #14	[2]	6	1:2 ft. ²
Minimum: 1.2" x 3' x 4'	Dekfast #14, #15	[2]	6	1:2 ft. ²
Minimum: 1.2" x 3' x 4'	Carlisle Secure Spike	[2]	6	1:2 ft. ²
Minimum: 1.2" x 3' x 4'	Olympic #14	[2]	6	1:2 ft. ²
Minimum: 1.2" x 3' x 4'	Rawl Spike	[2]	6	1:2 ft. ²
Minimum: 1.2" x 3' x 4'	Rawl Drive	[2]	6	1:2 ft. ²
Minimum: 1.2" x 3' x 4'	Tru-Fast #14	[2]	6	1:2 ft. ²



<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Wood Fiber				
Minimum: 1" x 2' x 4'	Carlisle Secure Spike	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Rawl Spike	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Rawl Drive	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Sure-Seal HP Fastener	[1]	4	1:2 ft. ²
Approved Type(s): Fiber Base				
Minimum: ½" x 4' x 8'	Sure-Seal HP Fastener	[4]	11	1:2.9 ft. ²
Minimum: ½" x 4' x 8'	Olympic #14	[4]	11	1:2.9 ft. ²
Minimum: ½" x 4' x 8'	Sure-Seal HP Fastener	[4]	11	1:2.9 ft. ²

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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Required over the insulations listed in Base Layer or optional over any of the insulations listed as Base or Top Layer :

Approved Type(s): HP Recovery (for use over all insul. types)				
Minimum: ½" x 4' x 4'	Sure-Seal HP Fastener	[3]	8	1:2 ft. ²
Minimum: ½" x 4' x 4'	Carlisle Secure Spike	[3]	8	1:2 ft. ²
Minimum: ½" x 4' x 4'	Rawl Spike	[3]	8	1:2 ft. ²
Minimum: ½" x 4' x 4'	Rawl Drive	[3]	8	1:2 ft. ²
Minimum: 1" x 2' x 4'	Sure-Seal HP Fastener	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Carlisle Secure Spike	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Rawl Spike	[1]	4	1:2 ft. ²
Minimum: 1" x 2' x 4'	Rawl Drive	[1]	4	1:2 ft. ²
Approved Type(s): Fiber Base (for use over polyisocyanurate, gypsum or perlite)				
Minimum: ½" x 4' x 8'	Sure-Seal HP Fastener	[4]	11	1:2.9 ft. ²
Minimum: ½" x 4' x 8'	Olympic #14	[4]	11	1:2.9 ft. ²
Minimum: ½" x 4' x 8'	Sure-Seal HP Fastener	[4]	11	1:2.9 ft. ²

Note: 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. Top layer of insulation may be adhered with Fast Adhesive. Please refer to Miami-Dade County Roofing Application Standard RAS 117 for insulation attachment.

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

Barrier: None.

Membrane: Sure-Weld or Sure-Weld GSD, Reinforced, 45 or 60 mil membrane fully adhered to the insulation using Sure-Weld Bonding Adhesive applied to the substrate at a rate of 1 gal/60 ft².

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

Maximum Fire Classification: See General Limitation #1



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Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced

Deck Type 3I: Concrete Decks, Insulated, New Construction

Deck Description: 2500 psi structural concrete.

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

All General and System Limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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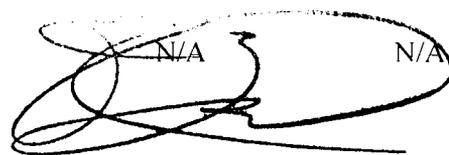
One of the following covered with the boards listed in Top Layer or Base or Top Layer.

Approved Type(s): Extruded Polystyrene Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Energy-Lok, ACFoam-II Minimum: 1" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Perlite Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of the following:

Approved Type(s): ACFoam II Minimum: 1.5" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): E'NRG'Y-2, PSI-25 Minimum: 1.4" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): HP Recovery Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): High Density Fiberboard Minimum: ¾" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): WHITELINE, PYROX, AP Minimum: 1.2" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): ISO 95+GL, GW, Rhoflex GL, GW Minimum: 1.4" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): ISO 95+ HF, Rhoflex HF Minimum: 1.2" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Multi-Max FA Minimum: 1.2" 3' x 4'	N/A	N/A	N/A	N/A



<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): ACFoam Composite, Rhoflex Composite, Fesco Foam Minimum: 1.5" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Polyisocyanurate HP-W Minimum: 1.5" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Polyisocyanurate HP Minimum: 1.2" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Polyisocyanurate HP-N Minimum: 1.4" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Structodeck Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Thermax Star AP, TRISTAR, Hy-Therm STABLE R Minimum: 1.2" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Ultra/M-II Iso/glas Minimum: 1.2" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): UltraGard Gold, Isolite E Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Wood Fiber Minimum: ½" x 4' x 8'	N/A	N/A	N/A	N/A
Approved Type(s): Fiber Base Minimum: ½" x 4' x 8'	N/A	N/A	N/A	N/A

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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Required over the insulations listed in Base Layer or optional over any of the insulations listed as Base or Top Layer :

Approved Type(s): HP Recovery (use over all other insul. types) Minimum: ½" x 4' x 4"	N/A	N/A	N/A	N/A
Approved Type(s): Fiber Base (use over polyisocyanurate, Gypsum or perlite) Minimum: ½" x 4' x 4"	N/A	N/A	N/A	N/A

All insulations 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 to the deck with FAST Adhesive



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- Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder applied to the roof deck or over a base layer of insulation.
- Barrier: None.
- Insulation: Any approved insulation listed in System Type D above preliminarily fastened in accordance with Roofing Application Standard RAS 117.
- Membrane: Sure-Weld or Sure-Weld GSD, Reinforced, secured through the preliminary attached insulation as specified below.
- Fastening #1: Sure-Seal HP-X Fasteners or HP Concrete Spikes with Piranha Plates 6" o.c. through the Sure-Weld Membrane in the lap in rows spaced 7'-7" o.c. **Maximum Design Pressure -67.5 psf. (See General Limitation #7)**
- Fastening #2: Sure-Seal HP-X Fasteners or HP Concrete Spikes with Piranha Plates 6" o.c. through the Sure-Weld Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -60 psf. (See General Limitation #7)**
- Fastening #3: Sure-Seal HP-X Fasteners or HP Concrete Spikes with Piranha Plates 9" o.c. through the Sure-Weld Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -52.5 psf. (See General Limitation #7)**
- Fastening #4: Sure-Seal HP-X Fasteners or HP Concrete Spikes with Piranha Plates 6" o.c. through the Sure-Weld GSD Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -52.5 psf. (See General Limitation #7)**
- Fastening #5: Sure-Seal HP-X Fasteners or HP Concrete Spikes with Piranha Plates 9" o.c. through the Sure-Weld GSD Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -45 psf. (See General Limitation #7)**
- Fastening #6: Sure-Seal HP-X Fasteners or HP Concrete Spikes with Piranha Plates 12" o.c. through the Sure-Weld Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -45 psf. (See General Limitation #7)**
- Maximum Fire Classification: See General Limitation #1



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GENERAL LIMITATIONS:

- 1 Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
- 2 Insulation may be applied in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer.
- 3 All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
- 4 An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet may be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
- 5 Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with TAS 105. If the fastener value, as field-tested, is below 275 lbf., insulation attachment shall not be acceptable.
- 6 Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within the specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer or Architect may be submitted. Said revised fastener spacing utilize the withdrawal resistance value taken from Miami-Dade Protocol 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 increase for both insulation and base sheet as needed calculated in compliance with Miami-Dade Roofing Application Standard TAS 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 TAS 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, corners). No rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners, and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**



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NOTICE OF ACCEPTANCE STANDARD CONDITIONS

- 1 Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.
- 2 Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
- 3 Renewals of Acceptance will not be considered if:
 - a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
 - b) The product is no longer the same product (identical) as the one originally approved;
 - c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
 - d) The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
- 4 Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
- 5 Any of the following shall also be grounds for removal of this Acceptance:
 - a) Unsatisfactory performance of this product or process;
 - b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
- 6 The Notice of Acceptance number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the Notice of Acceptance is displayed, then it shall be done in its entirety.
- 7 A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all times. The copies need not be resealed by the engineer.
- 8 Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
- 9 This Acceptance contains pages 1 through 17.

END OF THIS ACCEPTANCE



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