MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

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

NOTICE OF ACCEPTANCE (NOA)

Versico Inc.
1555 Ritner Highway
Carlisle, PA 17013

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Versico Versigard Single Ply Roof Systems – Recover Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of pages 1 through 16.
The submitted documentation was reviewed by Jorge L. Acebo

ROOFING SYSTEM APPROVAL

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

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product Name	Dimensions	Test Specifications	Product Description
Versigard	various	ASTM D 4637	Non-reinforced EPDM membrane.
Versigard II	various	ASTM D 4637	Non-reinforced, fire retardant EPDM membrane.
Versigard Reinforced Versigard Sure-Tough Reinforced	various	ASTM D 4637	Reinforced EPDM membrane.
Versigard Reinforced II	various	ASTM D 4637	Reinforced, fire retardant EPDM membrane.
Versigard Black Versifleece Versifleece AC EPDM 120 mil Membrane Versifleece AC EPDM 135 mil Membrane	various	ASTM D 4637	EPDM membrane with fleece backing..
Versigard White/Black	various	ASTM D 4637	Non-reinforced white on black EPDM membrane.
Versigard White Versifleece	Various	ASTM D4637	Non-reinforced white on black fleece backed EPDM membrane.
RTS	various	ASTM D 4637	Reinforced securement strip.
CCW 702 Primer	various	TAS 110	Solvent-Based Primer
CCW 702LT Primer	various	TAS 110	Low-Temperature Solvent-Based Primer
CCW 714 Primer	various	TAS 110	Water-Based Primer
CCW 725 Vapor Barrier	various	TAS 110	Vapor Barrier
FAST 100 Adhesive FAST 100-LV Adhesive FAST 100-P Adhesive FAST 102 Adhesive OlyBond 500 BA	various	TAS 110	Spray Polyurethane Adhesive
G300LS White Lap Sealant G300LS Black Lap Sealant		TAS 110	Lap Sealant for Versigard White/Black or Versigard membranes.
G100B White Seam Adhesive G100B White Adhesive		TAS 110	Splicing Adhesive for EPDM membranes.
QA Clear Pak Adhesive Seam Tape		TAS 110	Tape Adhesive for EPDM membranes.

Product Name	Dimensions	Test Specifications	Product Description
G200SA Yellow Substrate Adhesive		TAS 110	Solvent-based bonding adhesive.
B-500 Latex Bonding Adhesive		TAS 110	Water-based bonding adhesive.
Versico Metal Fastening Bars, ST Fastening Bars	1" wide	TAS 114	Metal bars used for membrane securement.
Aqua Base 120 Bonding Adhesive		TAS 110	Water-based Bonding adhesive.
CP-5067 Cold Process Adhesive		TAS 110	Asphalt-modified polyether adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam Composite	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp.
ACFoam II, III	Isocyanurate Insulation	Atlas Roofing Corp.
Polyisocyanurate MP, MP-N, MP-H, MP-W, MP-HNB	Polyisocyanurate roof insulation.	Versico Inc.
Versico Recovery Board	High Density Wood Fiberboard.	Versico Inc.
EPS/Fiberboard	High Density Wood Fiberboard bonded to EPS.	Versico Inc.
EPS Insulation	Expanded Polystyrene.	Versico Inc.
Carlisle Foamular ½" Board	Extruded Polystyrene recovery board.	Carlisle SynTec, Inc
HyTherm, HyTherm AP	Isocyanurate Insulation	Dow Chemical
Styrofoam	Extruded Polystyrene.	Dow Chemical
ISO 95+ GL, 95+ GW	Polyisocyanurate foam insulation	Firestone
Dens Deck, Dens Deck Prime	Silicon treated gypsum	G-P Products
Sturdi-Top	Wood fiber insulation board.	G-P Products
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Type X Gypsum, Gypsum	Gypsum Wallboard	Generic
EPS or XPS Insulation	Expanded or Extruded Polystyrene.	Generic
Ultra/M-II	Isocyanurate Insulation	Homasote Co.
H-Shield	Isocyanurate Insulation	Hunter Panels
ENRGY 2, ENERGY 3, PSI-25	Isocyanurate Insulation	Johns Manville
Foamular, Thermapink, Durapink	Extruded Polystyrene.	Owens Corning
Strataguard	Gypsum Wallboard	Owens Corning
Green Guard	Extruded Polystyrene insulation	Pactiv
Multi-Max, FA	Polyisocyanurate foam insulation	RMax, Inc.
Fiber Base	Asphalt coated wood fiber insulation	Temple Inland Forest Products Corp.
Structodeck	High Density Wood Fiber insulation board.	Wood Fiber Industries

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Versico HPV, HPVX, HPV-XL Fasteners, Sure-Tite, Insul-Tite	Insulation and membrane fastener	Various	Versico Inc
2.	Versico MP 14-10, CD-10	Insulation and membrane fastener	Various	Versico Inc
3.	Versico HPV-ASAP	Pre-assembled fastener & plate for insulation and membrane	Various	Versico Inc
4.	Versico Seam Fastening Plates	Metal plates for membrane securement.		Versico Inc
5.	Versico NTB Fasteners	Fastener for cementitious and gypsum decks	Various	Versico Inc
6.	Versico NTB Insulation Plates	Metal plates used for insulation securement.	3" dia	Versico Inc
7.	Versico Insulation Plates	Metal plates used for insulation securement.	2-$^{7}/_{8}$"	Versico Inc
8.	Versico Polymer Seam Plates	Plastic plates used for membrane securement.	2" dia	Versico Inc
9.	HPVX, HPV-XL Plates	Plates used for membrane securement.	2-$^{3}/_{8}$" dia	Versico Inc
10.	#14 Roofgrip	Insulation and membrane fastener	Various	ITW Buildex
11.	Metal Plate	Galvalume AZ50 stress plate	3" square	ITW Buildex
12.	Plastic Plate	Polyethylene stress plate	3.2" round	ITW Buildex
13.	Olympic Fasteners #12 and #14	Insulation and membrane fastener	Various	Olympic Mfg. Group
14.	Olympic Stainless Fasteners #14	Stainless steel insulation and membrane fastener	Various	Olympic Mfg. Group
15.	Strap Toggle	Fastener for steel, wood, CWF and gypsum decks.	Various	Olympic Mfg. Group
16.	Iron-Lok Toggle	Fastener for steel, wood, CWF and gypsum decks.	Various	Olympic Mfg. Group
17.	Olympic ASAP	Pre-assembled fastener & plate for insulation and membrane	Various	Olympic Mfg. Group
18.	Lite Deck Fastener	Fastener for CWF and Gypsum decks	Various	Olympic Mfg. Group
19.	Lite-Deck Plate	Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
20.	NTB Plate	Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
21.	NTB Metal Barbed Stress Plate	Galvalume AZ55 stress plate	2" round	Olympic Mfg. Group

APPROVED FASTENERS: TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
22.	NTB Plastic Plate	Plastic plates for NTB 2" head fasteners.	3" round	Olympic Mfg. Group
23.	Olympic Standard	Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
24.	Olympic Plastic, ASAP	Plastic plates for fasteners.	3" round	Olympic Mfg. Group
25.	Rawl Fasteners #14	Fastener for steel and wood decks	Various	Powers Fasteners Inc.
26.	Rawl Drive	Fastener for concrete decks		Powers Fasteners Inc.
27.	Rawl Spike	Fastener for concrete decks		Powers Fasteners Inc.
28.	Rawl Speed-Lock Toggle Bolt	Insulation fastener assembly		Powers Fasteners Inc.
29.	Powerlite	Insulation fastener for cementitious and gypsum decks.		Powers Fasteners Inc.
30.	Powerlite	Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.
31.	Rawl Insulation Plate	Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.
32.	Insul-Fixx Fastener	Insulation fastener for steel and wood decks	Various	SFS Intec, Inc.
33.	Isofast Fasteners	Insulation fastener for steel and wood decks	Various	SFS Intec, Inc.
34.	Insul-Fixx S	Galvalume AZ55 stress plate	3" round	SFS Intec, Inc.
35.	Insul-Fixx P	Polyethylene stress plate	3" round	SFS Intec, Inc.
36.	Isofast Plate	Square or oblong Galvalume steel plates for use with Isofast fasteners		SFS Intec, Inc.
37.	Dekfast Fasteners #14, #15	Insulation and membrane fastener	Various	SFS Intec, Inc.
38.	Dekfast Hex Plate	Insulation plate.	Various	SFS Intec, Inc.
39.	Tru-Fast Fasteners	Insulation and membrane fastener	Various	The Tru-Fast Corp.
40.	Tru-Fast Ultra Stainless Fasteners	Stainless steel insulation and membrane fastener	Various	The Tru-Fast Corp.
41.	Tru-Fast MP-3	Galvalume AZ50 steel plate	3" round	The Tru-Fast Corp.
42.	Tru-Fast Plastic Plate	Polyethylene stress plate	3" round	The Tru-Fast Corp.

EVIDENCE SUBMITTED

Test Agency	Test Identifier	Description	Date
Architectural Testing Inc.	ATI-17601-01	Wind Uplift Classification	06/29/96
	ATI-17601-02	Wind Uplift Classification	07/30/96
	ATI-18535	Wind Uplift Classification	10/14/96
Factory Mutual Research Corp.	J.I. 2Z3A9.AM	Wind Uplift and Fire Classification	07/30/97
	J.I. 4B2A1.AM	Wind Uplift Classification	06/11/97
	J.I.3B8Q4.AM	Wind Uplift Classification	06/04/97
	J.I. 3B5A1.AM	Wind Uplift and Fire Classification	04/28/97
	J.I. 2Z2A8.AM	Seam Test	05/16/97
	J.I. 0B4A7.AM	Wind Uplift Classification	05/29/97
	J.I. 2B2A1.AM	Wind Uplift Classification	05/29/97
	J.I.1B7A5.AM	Wind Uplift and Fire Classification	02/23/98
	J.I. 2D6A6.AM	Wind Uplift Classification	10/7/98
	3016162	Class 4470	11/25/03
	3009502	Class 4470	12/21/00
	3024994	Class 4450	02/28/06
	3013584	Class 4470	06/27/03
	3019897	Class 4470	10/07/05
	3022187	Class 4470	09/15/05
	3022181	Class 4470	09/01/05
	3014692	Class 4470	08/05/03
Underwriters Laboratories, Inc.	96NK21757	Fire Classification	09/06/96
	96NK10924	Fire Classification	10/31/96
	96NK28871	Fire Classification	11/06/96
	96NK33323	Fire Classification	10/24/97
	02NK46936	UL 790	12/15/03

APPROVED ASSEMBLIES

Membrane Type: Single Ply, Thermoset, EPDM, Fleecebacked

Deck Type 7I: Recover

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

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

All General and System Limitations apply.

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

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or OlyBond 500 BA or FAST Adhesive at minimum rate 1 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder: None.

Barrier: None

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

Or

Versigard or Versigard White/Black 45 to 90 mil membrane fully adhered to the insulation using G200SA Yellow Substrate Adhesive applied to the substrate at a rate of 1 gal/60ft.^{2}, or B-500 Latex Bonding Adhesive applied to the substrate at 1 gal/sq.

Or

Versifleece AC EPDM 120 or 135 mil membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or CP-5067 Cold Process Adhesive applied to the substrate at a rate of 1 gal/67 ft^2.

Surfacing: (Optional) A two-part surfacing consisting of G-700HC Hysunite Coating applied at the rate of 1 gal./150 ft^2 and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Versico Acrylic Coating at a rate 1.5 gal/sq. per coat.

Maximum Design Pressure:

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

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

-60 psf (See General Limitation #9) (Versifleece AC EPDM membranes with CP-5067 Cold Process Adhesive) with Fast Adhesive or asphalt only.

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

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

Membrane Type: Single Ply, Thermoset, EPDM, Fleecebacked

Deck Type 7I: Recover

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

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

All General and System Limitations apply.

One or more layers of the following.

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

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the existing roof with OlyBond 500 BA or FAST Adhesive at minimum rate 1 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder: None.

Barrier: None.

Membrane: Versigard Black or White Versifleece 100 or 115 mil membrane fully adhered to the insulation using FAST Adhesive applied to the substrate at a rate of 1 gal./sq or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft².
Or
Versigard or Versigard White/Black 45 to 90 mil membrane fully adhered to the insulation using G200SA Yellow Substrate Adhesive applied to the substrate at a rate of 1 gal/60ft.^{2}, or B-500 Latex Bonding Adhesive applied to the substrate at 1 gal/sq.
Or
Versifleece AC EPDM 120 or 135 mil membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq , or CP-5067 Cold Process Adhesive applied to the substrate at a rate of 1 gal/67 ft².

Surfacing: (Optional) A two-part surfacing consisting of G-700HC Hysunite Coating applied at the rate of 1 gal./150 ft² and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Versico Acrylic Coating at a rate 1.5 gal/sq. per coat.

Maximum Design Pressure:
-420 psf (For Extruded Polystyrene) (See General Limitation #9) with Fast Adhesive.
-322.5 psf (For Expanded Polystyrene) (See General Limitation #9) with Fast Adhesive
-120 psf (For Expanded Polystyrene) (See General Limitation #9) with OlyBond 500 BA
-120 psf (For Extruded Polystyrene with woodfiber or gypsum cover board) (See General Limitation #9) with OlyBond 500 BA

Membrane Type: Single Ply, Thermoset, EPDM, Reinforced, Non-reinforced, Fleecebacked.

Deck Type 7I: Recover

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

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

All General and System Limitations apply.

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

Note: All layers shall be simultaneously fastened; see top or base layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Single and multiple layers of insulation can be adhered with any FAST Adhesive in a full coverage application. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**

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

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

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

Vapor Retarder:	(Optional) Any UL or FM approved vapor retarder applied to the roof deck or over a base layer of insulation.
Barrier:	None.
Membrane #1:	Versigard or Versigard White/Black 45 to 90 mil membrane fully adhered to the insulation using G200SA Yellow Substrate Adhesive applied to the substrate at a rate of 1 gal/60 ft.², or B-500 Latex Bonding Adhesive applied to the substrate at 1 gal./sq. ***Maximum Design Pressure –45 psf (See General Limitation #9)***
Membrane #2:	Versigard Black or White Versifleece 100 or 115 mil membrane fully adhered to the insulation using FAST Adhesive applied to the substrate at a rate of 1 gal/sq or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft². ***Maximum Design Pressure –60 psf. (See General Limitation #7)***
Membrane #3	Versifleece AC EPDM 120 or 135 mil membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq , or CP-5067 Cold Process Adhesive applied to the substrate at a rate of 1 gal/67 ft². ***Maximum Design Pressure – 60 psf. (See General Limitation #7).***
Surfacing:	(Optional) A two-part surfacing consisting of G-700HC Hysunite Coating applied at the rate of 1 gal./150 ft² and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Versico Acrylic Coating at a rate 1.5 gal/sq. per coat.
Maximum Design Pressure:	See Membrane Options Above

Membrane Type: Single Ply, Thermoset, EPDM, Reinforced

Deck Type 7I: Recover

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

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

All General and System Limitations apply.

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

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

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

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

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

Barrier: None.

Membrane:	Versigard Reinforced, Versigard Reinforced II or Versigard Sure-Tough Reinforced secured through the preliminarily attached insulation as specified below.
Deck:	Structural Concrete Deck or Minimum 22 gage ASTM A653 Grade C Steel deck fastened to steel support at a maximum span of 6 feet o.c. Steel deck shall be fastened with minimum ITW Buildex Traxx/5 at a maximum spacing of 6 inches o.c. Side laps shall be fastened with Traxx/1 at a maximum spacing of 24 inches o.c.
Fastening #1:	Versico Metal Fastening Bars with Versico HPVX or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 12" o.c. installed through the reinforced membrane in the lap or through a RTS strip in rows spaced maximum 6'-6" o.c. ***Maximum Design Pressure –45 psf (See General Limitation #7)***
Fastening #2:	Versico Metal Fastening Bars with Versico HPVX or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 6" o.c. installed through the reinforced lap or through a RTS strip in rows spaced maximum 9'-6" o.c. ***Maximum Design Pressure –52.5 psf (See General Limitation #7)***
Fastening #3:	Versico HPV or concrete Fasteners with Versico Polymer Plates spaced 6" o.c. through the reinforced membrane in the lap or through a RTS strip in rows spaced maximum 9'-6" o.c. ***Maximum Design Pressure -45 psf. (See General Limitation #7)***
Fastening #4:	Versico HPV or concrete Fasteners with Versico Polymer Plates spaced 6" o.c. through the reinforced membrane in the lap or through a RTS strip in rows spaced maximum 6'-6" o.c. ***Maximum Design Pressure –52.5 psf. (See General Limitation #7)***
Fastening #5:	Versico Metal Fastening Bars with Versico HPVX or concrete Fasteners or ST Fastening Bar With Sure-Tite or concrete Fasteners spaced 6" o.c. installed through the reinforced membrane in the lap or through a RTS strip in rows spaced maximum 6'-6" o.c. ***Maximum Design Pressure –67.5 psf (See General Limitation #7)***
Fastening #6:	Versico HPV Fasteners or concrete Fasteners with Versico Polymer Plates 6" o.c. installed through the Versigard Sure-Tough Reinforced Membrane in rows spaced maximum 9'-6" o.c. ***Maximum Design Pressure -52.5 psf. (See General Limitation #7)***
Surfacing:	(Optional) A two-part surfacing consisting of G-700HC Hysunite Coating applied at the rate of 1 gal./150 ft² and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Versico Acrylic Coating at a rate 1.5 gal/sq. per coat.
Maximum Design Pressure:	See Fastening Options Above

Membrane Type: Single Ply, Thermoset, EPDM, Reinforced

Deck Type 7I: Recover

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

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

All General and System Limitations apply.

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

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

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

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

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

Barrier: None.