



Code Approval Guide

August 2024

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Versico Roofing Systems, a division of Carlisle Construction Materials LLC

CODE APPROVAL GUIDE

August 2024

INTRODUCTION

This Code Approval Guide addresses both general information pertaining to Underwriters Laboratories (UL) and FM Approvals (FM) test criteria as well as specific UL and FM code approvals achieved with Versico's VersiFlex Adhered and Mechanically-Fastened Roofing Systems. Various independent test laboratory results along with national building code approvals are also identified in this guide. Code approvals available with Versico's VersiFleece, VersiWeld and VersiGard Roofing Systems are identified in separately published Code Approval Guides.

Code ratings are categorized by roof system type (Mechanically-Fastened, Adhered) and are separated into 2 sections; UL Approvals and FM Approvals. Underwriters Laboratories rated roof assemblies are grouped according to deck type (non-combustible or combustible) and are further categorized by the severity of fire exposure (Class A, B or C). FM Approvals approved assemblies are categorized according to deck type and the specific type of construction (new, tear-off or retrofit).

The listed assemblies contained in this guide are grouped generically based on deck classification. Specific substrate requirements for each Versico Roofing System can be identified in the respective Versico Specifications.

In the UL and FM Approvals throughout this guide, when multiple layers of insulation are referenced, the product listed first identifies the insulation directly below the membrane. For example; a listing of Recovery Board/Polyisocyanurate indicates the Recovery Board is installed directly under the membrane. A listing of Gypsum Board/Polystyrene indicates the Gypsum Board is installed directly under the membrane.

General Guidelines for Underwriters Laboratories and FM Approvals Code Compliance

These guidelines are intended to focus on the essential criteria to be followed when an Underwriters Laboratories (UL) and/or FM Approvals (FM) approved assembly is specified. Generally, the Versico published specifications reflect the minimum requirements necessary to obtain the applicable Versico warranty. Code requirements are not specifically covered in the Versico specifications and are considered to be above and beyond the provisions of the Versico warranty.

Individuals specifying an approved assembly or selecting various products to achieve a specific UL/FM rating must recognize the importance of ensuring proper component selection to fully comply with the most current listings published. **All materials used in the roofing system must be UL and/or FM approved and must have been tested together as part of a complete roofing assembly.**

In addition to the code approval listings in this guide, information pertaining to approved assemblies can also be obtained directly from UL and FM as follows:

1. **Underwriters Laboratories On-Line Certifications Directory** (<https://productiq.ulprospector.com/en>).
2. **FM Approvals RoofNAV website** (roofnav.com). FM RoofNAV assembly numbers can be obtained from this website.

Underwriters Laboratories

1. The criteria required to obtain **UL External fire ratings** (Class A, B or C) can be identified in this guide or can be searched for on the UL website using the UL Category Code TGFU. UL ratings approved for use on combustible decks are also acceptable on non-combustible decks.
2. For **UL internal fire ratings** (hourly constructions – P Numbers), search the UL website use the UL Category Code BXUV.

FM Approvals

Uplift ratings listed in this guide are for the field of the roof. Additional requirements/enhancements are required by FM in the perimeter and corner areas, for deck securement and for perimeter nailer/edge attachment. Refer to FM Property Loss Prevention Data Sheets 1-28, 1-29 and 1-49 for specific requirements. On FM insured projects, the FM insuring agent **MUST** review and approve the proposed roofing assembly prior to installation. When FM is not the insuring entity for the building, use the **Approved American National Standard ANSI/SPRI WD-1** for design purposes.

Note: All Versico Roof Systems referenced within this document meet Class 1 construction and Severe Hail (SH) ratings.

Approved American National Standard ANSI/SPRI WD-1

The ANSI/SPRI Wind Design Standard Practice for Roofing Assemblies should be referenced when a project is not FM insured. This document was developed as a consensus National Standard and provides a methodology for designing for wind uplift resistance of roofing system assemblies. Insulation fastening patterns are included in this document. The fastening patterns are approved for use by Versico.

RECOVERS

Recover approvals in this document are based on the following existing roofing system assumption - the existing Smooth Asphalt BUR, Modified Bitumen or single-ply system was FM Approved at the time of installation.

SUMMARY

Due to complexity of the code documents and the variety of information that must be reviewed, it is important to consult with Versico and other respective manufacturers concerning the most current available approvals.

- **Prior to project bid** - Products specified by the architect must be thoroughly investigated to determine if the specified rating can be achieved and local building codes must be consulted regarding any additional requirements.
- **Prior to installation** - Project managers should review the code requirements with field construction personnel to ensure compliance with project requirements.

Upon completion of the roofing installation, each project is inspected by a Versico Technical Representative to ensure compliance with Versico's current specification requirements for the issuance of the applicable warranty. However, this inspection is not for the purpose of verifying code compliance.

VersiFlex™ PVC & KEE HP Mechanically-Fastened Roofing System

UL Approval - Non-Combustible - ANSI/UL 790 Spread of Flame Test (Class A)

Membrane .050", .060" or .080" VersiFlex PVC Reinforced Membrane

Type: .050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Non-Combustible: Steel; St. Concrete; Gypsum; Tectum (Min. 2" thick)

System ID	Deck Type	Insulation	Cover Board	Maximum Slope
1	Non-Combustible	VersiCore, or SecurShield- any combination, any thickness	N/A	2-1/2"
2		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SecurShield HD, SecurShield HD Plus or SecurShield HD Composite	2-1/2"
3		Minimum 1" layer of VersiCore or SecurShield over any UL Classified EPS or XPS Insulation, maximum 1.25 pcf, any thickness	N/A	1"
4		Insulfoam SP or Insulfoam SP over Insulfoam EPS, any thickness and density.	N/A	2"
5		Insulfoam HD Composite or Insulfoam HD Composite over Insulfoam EPS, any thickness and density.	N/A	2"
6		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" SECUROCK® Gypsum-Fiber Board & Glass Mat Roof Boards	Unlimited
7		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck/DensDeck Prime Roof Boards	Unlimited
8		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" Recovery Board	1"
9		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 7/16" APA Rated OSB or Minimum 1-1/2" DuraFacer	1"
10		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 5/16" DuraStorm VSH	2-1/2"
11		Any UL Classified Versico Polyisocyanurate Insulation- any combination, any thickness (OPTIONAL)	1/2" VersiCore HD	2-1/2"
12		Any UL Classified Insulation, any combination, any thickness	Versico FR Base Sheet	1"
13	Structural (poured-in-place) concrete	N/A	N/A	1"
14	Precast concrete with grouted joints	N/A	N/A	1"

VersiFlex™ PVC & KEE HP Mechanically-Fastened Roofing System

UL Approval - Combustible (1) - ANSI/UL 790 Spread of Flame Test - Class A

Membrane .050", .060" or .080" VersiFlex PVC Reinforced Membrane

Type: .050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Combustible: 7/16-in. (minimum) thick non-veneer APA-rated sheathing (oriented strand board panels, structural particleboard panels, composite panels or waferboard panels); 15/32-in. (minimum) thick plywood 3/4 in. (minimum) wood; Tectum (less than 2" thick)

System ID	Thermal Barrier/ Base Sheet	Insulation	Cover Board	Maximum Slope
Combustible (1) - ANSI/UL 790 Spread of Flame Test-Class A				
1	Minimum 1/4" SECUROCK® Gypsum Fiber or Glass Mat Roof Board (2)	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	2-1/2"
2	Minimum 1/4" DensDeck or DensDeck Prime Roof Boards (2)	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	2-1/2"
3	N/A	Minimum 1" thick layer of SecurShield or SecurShield HD Composite is placed directly over a combustible roof deck. An optional layer or layers of any Versico Polyisocyanurate Insulation may be used below the minimum 1" thick top layer, any combination, any thickness. (3)	N/A	1/2"
4	N/A	Minimum 1" thick layer of SecurShield or SecurShield HD Composite over a minimum 3-1/2" thick layer of any UL Classified EPS insulation is placed directly over a combustible roof deck. (3)	N/A	1/2"
5	N/A	OPTIONAL layer or layers of any Versico Polyisocyanurate Insulation may be used below the minimum 1/2" thick top layer, any combination, any thickness. (3)	1/2" thick SecurShield HD or SecurShield HD Plus is placed directly over a combustible roof deck. (3)	1"
6	N/A	Minimum 4" thick layer of any UL Classified EPS insulation is placed directly over a combustible roof deck. (3)	1/2" thick SecurShield HD or SecurShield HD Plus. (3)	1/2"
7	N/A	Minimum 1-1/2" layer of Insulfoam HD Composite over a minimum 3" layer of Insulfoam EPS. (2)	N/A	1/2"
8	N/A	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	Minimum 1/4" SECUROCK® Gypsum Fiber Roof Board (2)	3"
9	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 3/8" SECUROCK® Gypsum Fiber Roof Board (2)	2"
10	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SECUROCK® Gypsum Fiber Roof Board (2)	4"
11	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" SECUROCK® Glass-Mat or Coated Glass Mat Roof Boards (2)	Unlimited
12	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck/DensDeck Prime Roof Board (2)	Unlimited
13	Two layers of Versico FR Base Sheet	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness. (OPTIONAL)	N/A	3/4"

VersiFlex™ PVC & KEE HP Mechanically-Fastened Roofing System

UL Approval - Non-Combustible and Combustible (1) - ANSI/UL 790 Spread of Flame Test - Class B

Membrane .050'', .060'' or .080" VersiFlex PVC Reinforced Membrane

Type: .050'', .060'' or .080'' VersiFlex KEE HP Reinforced Membrane

Combustible: 7/16-in. (minimum) thick non-veneer APA-rated sheathing (oriented strand board panels, structural particleboard panels, composite panels or waferboard panels); 15/32-in. (minimum) thick plywood 3/4 in. (minimum) wood; Tectum (less than 2" thick)

System ID	Thermal Barrier/ Base Sheet	Insulation	Cover Board	Maximum Slope
Combustible (1) - ANSI/UL 790 Spread of Flame Test-Class B				
1	One Layer of Versico FR Base Sheet	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness. (OPTIONAL)	N/A	1/2"
2	Inverted G3 cap sheet	N/A	N/A	1/2"
System ID	Thermal Barrier/ Base Sheet	Insulation	Cover Board	Maximum Slope
Non-Combustible - ANSI/UL 790 Spread of Flame Test-Class B				
3	N/A	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	Unlimited

VersiFlex™ PVC & KEE HP Mechanically-Fastened Roofing System

UL Approval - Combustible and Non-Combustible - ANSI/UL 790 Spread of Flame Test - Class C

Membrane .050'', .060'' or .080" VersiFlex PVC Reinforced Membrane
Type: .050'', .060'' or .080'' VersiFlex KEE HP Reinforced Membrane

Combustible: 7/16-in. (minimum) thick non-veneer APA-rated sheathing (oriented strand board panels, structural particleboard panels, composite panels or waferboard panels); 15/32-in. (minimum) thick plywood 3/4 in. (minimum) wood; Tectum (less than 2" thick)

Non-Combustible: Steel, St. Concrete, Gypsum or Tectum (Min. 2" thick)

System ID	Thermal Barrier/Base Sheet	Insulation	Cover Board	Maximum Slope
Combustible - ANSI/UL 790 Spread of Flame Test-Class C				
1	N/A	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness. Optionally, any UL Classified insulation, any combination, any thickness may be used below the Versico Polyisocyanurate Insulation.	N/A	Unlimited
2	N/A	Any UL Classified insulation, any combination, any thickness. (OPTIONAL)	Minimum 5/16" DuraStorm VSH (2)	1/2"
3	N/A	1/2" Min. Recovery Board	N/A	1"

**Existing UL Rating Retained - Non-Combustible or Combustible
(Directly over existing Class A, B or C)**

System ID	Deck Type	Existing Substrate	Insulation	Maximum Slope
1	Non-Combustible and Combustible	Any Class A, B or C roof covering system.	One layer of Versico FR Base Sheet (OPTIONAL)	3/4"
2	Non-Combustible	Class A, B or C built-up or modified bitumen system, (smooth surface, cap sheet or gravel surfaced with gravel maintained). Or Class A, B or C single-ply system (polystyrene in existing single-ply system must be below a coverboard or minimum 1 in. thickness of polyisocyanurate), to retain the existing Classification.	Insulfoam "R-TECH" Type "I", "VIII", "II", "IX" or "FanFold" 1 in. maximum thickness.	1/2"
3	Non-Combustible and Combustible	Class A, B or C built-up system, smooth surface, cap sheet or gravel surfaced (gravel maintained) to retain the existing Classification.	Insulfoam "R-TECH" Type "I", "VIII", "II", "IX", "FanFold" 1 in. maximum thickness.	1/2"

VersiFlex™ (PVC) Mechanically-Fastened Roofing System for VersiCore and SecurShield
Factory Mutual (FM) Approvals

FM Approval - Field Sheet Securement Criteria (10)(11)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane (120" only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge	FM Ratings over Min. 22 Gauge
			Grade C Steel (33 ksi)	Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HPVX/HPVX Plate	6"		1-75 (307057-0-0)
	HPV-XL/HPV-XL Plate	12"		1-60 (307052-0-0)
	HPVX/Oval Barbed	6"		1-90 (323786-0-0)
81"	HPVX/HPVX Plate	6"		1-105 (143334-0-0)
		12"	1-75 (143339-0-0)	1-90 (143340-0-0)
	HPV-XL/HPV-XL Plate	12"	1-75 (336447-0-0)	1-90 (143337-0-0)
	HPVX/HPVX Plate	18"	1-60 (143349-0-0)	1-60 (143349-0-0)
	HPV-XL/HPV-XL Plate	18"	1-60 (143336-0-0)	1-60 (143336-0-0)
60"	HPVX/HPVX Plate	12"	1-90 (393514-0-0)	1-90 (393514-0-0)
		6"	1-120 (394663-0-0)	1-150 (393538-0-0)
40-1/2"	HPVX/HPVX Plate	6"	1-165 (143335-0-0)	1-165 (143335-0-0)
		12"	1-120 (353942-0-0)	1-120 (353942-0-0)

FM Approval - Induction Welding Securement Criteria

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

FM Approvals – Induction Welding Securement					
Deck Type	Fastener/Plate	Rating	Fasteners per 4' x 8' Board		
			Zone 1	Zone 2	Zone 3
Min. 22 Gauge Grade C Steel (33 ksi)	HPVX / RhinoBond PVC Plate	1-90 (341110-0-0)	6	9	12
		1-105 (341109-0-0)	8	12	16
		1-165 (387207-0-0)	16	24	32
	HPV-XL / RhinoBond PVC Plate	1-135 (346217-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HPVX / RhinoBond PVC Plate	1-120 (341108-0-0)	8	12	16
	HPVX / RhinoBond PVC Plate	1-195 (387224-0-0)	16	24	32

FM Approvals – Induction Welding Linear Securement					
Deck Type	Fastener	Plate	Row Spacing	Fastener Spacing in Rows	Rating
Min. 22 Gauge Grade E Steel (80 ksi)	HPVX	RhinoBond PVC PLATE	5'	6"	1-180 (323359-0-0)
			5'	12"	1-105 (323363-0-0)
			5'	18"	1-75 (323361-0-0)
			10'	6"	1-120 (323358-0-0)
			10'	12"	1-60 (323357-0-0)

VersiFlex™ (PVC) Mechanically-Fastened Roofing System for VersiCore and SecurShield Recover
Factory Mutual (FM) Approvals

FM Approval - Field Sheet Securement Criteria (10)(11)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane (120" only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge	FM Ratings over Min. 22 Gauge
			Grade C Steel (33 ksi)	Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HPVX/HPVX Plate	6"		1-75
	HPV-XL/HPV-XL Plate	12"		1-60
	HPVX/Oval Barbed	6"		1-90
81"	HPVX/HPVX Plate	6"		1-105 (303455-0-0)
		12"	1-75 (380198-0-0)	1-90 (303465-0-0)
	HPV-XL/HPV-XL Plate	12"	1-75	1-90 (303462-0-0)
	HPVX/HPVX Plate	18"	1-60 (303466-0-0)	1-60 (303466-0-0)
	HPV-XL/HPV-XL Plate	18"	1-60 (303458-0-0)	1-60 (303458-0-0)
60"	HPVX/HPVX Plate	12"	1-90 (393577-0-0)	1-90 (393577-0-0)
		6"	1-120 (303576-0-0)	1-150 (303581-0-0)
40-1/2"	HPVX/HPVX Plate	6"	1-165 (303456-0-0)	1-165 (303456-0-0)
		12"	1-105 (303463-0-0)	1-105 (303463-0-0)

FM Approval - Induction Welding Securement Criteria

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

FM Approvals – Induction Welding Securement					
Deck Type	Fastener/Plate	Rating	Fasteners per 4' x 8' Board		
			Zone 1	Zone 2	Zone 3
Min. 22 Gauge Grade C Steel (33 ksi)	HPVX / RhinoBond PVC Plate	1-90 (341113-0-0)	6	9	12
		1-105 (341112-0-0)	8	12	16
		1-165 (387429-0-0)	16	24	32
	HPV-XL / RhinoBond PVC Plate	1-135 (383685-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HPVX / RhinoBond PVC Plate	1-120 (341111-0-0)	8	12	16
	HPVX / RhinoBond PVC Plate	1-195 (387435-0-0)	16	24	32

VersiFlex™ (PVC) Mechanically-Fastened Roofing System for DensDeck and Securock
Factory Mutual (FM) Approvals

FM Approval - Field Sheet Securement Criteria (10)(11)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane (120" only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge	FM Ratings over Min. 22 Gauge
			Grade C Steel (33 ksi)	Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HPVX/HPVX Plate	6"		1-75
	HPV-XL/HPV-XL Plate	12"		1-60
	HPVX/Oval Barbed	6"		1-90
81"	HPVX/HPVX Plate	6"		1-105 (236903-0-0)
		12"	1-75 (237573-0-0)	1-90 (237591-0-0)
	HPV-XL/HPV-XL Plate	12"	1-75	1-90 (236919-0-0)
	HPVX/HPVX Plate	18"	1-60 (237596-0-0)	1-60 (237596-0-0)
	HPV-XL/HPV-XL Plate	18"	1-60 (236915-0-0)	1-60 (236915-0-0)
60"	HPVX/HPVX Plate	12"	1-90 (393513-0-0)	1-90 (393513-0-0)
		6"	1-120 (394658-0-0)	1-150 (393538-0-0)
40-1/2"	HPVX/HPVX Plate	6"	1-165 (236904-0-0)	1-165 (236904-0-0)
		12"	1-105 (237538-0-0)	1-105 (237538-0-0)

FM Approval - Induction Welding Securement Criteria

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

FM Approvals – Induction Welding Securement					
Deck Type	Fastener/Plate	Rating	Fasteners per 4' x 8' Board		
			Zone 1	Zone 2	Zone 3
Min. 22 Gauge Grade C Steel (33 ksi)	HPVX / RhinoBond PVC Plate	1-90 (341230-0-0)	6	9	12
		1-105 (341229-0-0)	8	12	16
		1-165 (387203-0-0)	16	24	32
	HPV-XL / RhinoBond PVC Plate	1-135 (346233-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HPVX / RhinoBond PVC Plate	1-120 (341228-0-0)	8	12	16
	HPVX / RhinoBond PVC Plate	1-195 (387215-0-0)	16	24	32

FM Approvals – Induction Welding Linear Securement					
Deck Type	Fastener	Plate	Row Spacing	Fastener Spacing in Rows	Rating
Min. 22 Gauge Grade E Steel (80 ksi)	HPVX	RhinoBond PVC PLATE	5'	6"	1-180 (434606-0-0)
			5'	12"	1-105 (434605-0-0)
			5'	18"	1-75 (424604-0-0)
			10'	6"	1-120 (434603-0-0)
			10'	12"	1-60 (434602-0-0)

VersiFlex™ (PVC) Mechanically-Fastened Roofing System for SecurShield HD and VersiCore HD
Factory Mutual (FM) Approvals

FM Approval - Field Sheet Securement Criteria (10)(11)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane (120" only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge	FM Ratings over Min. 22 Gauge
			Grade C Steel (33 ksi)	Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HPVX/HPVX Plate	6"		1-75
	HPV-XL/HPV-XL Plate	12"		1-60
	HPVX/Oval Barbed	6"		1-90
81"	HPVX/HPVX Plate	6"	1-75 (333705-0-0)	1-105 (280570-0-0)
		12"	1-75 (281249-0-0)	1-90 (281250-0-0)
	HPV-XL/HPV-XL Plate	12"	1-75 (337160-0-0)	1-90 (281247-0-0)
	HPVX/HPVX Plate	18"	1-60 (281251-0-0)	1-60 (281251-0-0)
	HPV-XL/HPV-XL Plate	18"	1-60 (281246-0-0)	1-60 (281246-0-0)
60"	HPVX/HPVX Plate	12"	1-90 (394656-0-0)	1-90 (394656-0-0)
		6"	1-120 (394661-0-0)	1-150
40-1/2"	HPVX/HPVX Plate	6"	1-165 (281245-0-0)	1-165 (281245-0-0)
		12"	1-105 (281248-0-0)	1-120 (354136-0-0)

FM Approval - Induction Welding Securement Criteria

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

FM Approvals – Induction Welding Securement					
Deck Type	Fastener/Plate	Rating	Fasteners per 4' x 8' Board		
			Zone 1	Zone 2	Zone 3
Min. 22 Gauge Grade C Steel (33 ksi)	HPVX / RhinoBond PVC Plate	1-90 (340690-0-0)	6	9	12
		1-105 (340680-0-0)	8	12	16
		1-165 (387204-0-0)	16	24	32
	HPV-XL / RhinoBond PVC Plate	1-135 (346232-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HPVX / RhinoBond PVC Plate	1-120 (340668-0-0)	8	12	16
	HPVX / RhinoBond PVC Plate	1-195 (387216-0-0)	16	24	32

FM Approvals – Induction Welding Linear Securement					
Deck Type	Fastener	Plate	Row Spacing	Fastener Spacing in Rows	Rating
Min. 22 Gauge Grade E Steel (80 ksi)	HPVX	RhinoBond PVC PLATE	5'	6"	1-180 (434596-0-0)
			5'	12"	1-105 (434595-0-0)
			5'	18"	1-75 (434594-0-0)
			10'	6"	1-120 (434593-0-0)
			10'	12"	1-60

VersiFlex™ (PVC) Mechanically-Fastened Roofing System for SecurShield HD and VersiCore HD Recover
Factory Mutual (FM) Approvals

FM Approval - Field Sheet Securement Criteria (10)(11)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane (120" only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge	FM Ratings over Min. 22 Gauge
			Grade C Steel (33 ksi)	Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HPVX/HPVX Plate	6"	-	1-75
	HPV-XL/HPV-XL Plate	12"	-	1-60
	HPVX/Oval Barbed	6"	-	1-90
81"	HPVX/HPVX Plate	6"	-	1-105 (303455-0-0)
		12"	1-75 (380198-0-0)	1-90 (303465-0-0)
	HPV-XL/HPV-XL Plate	12"	1-75	1-90 (303462-0-0)
	HPVX/HPVX Plate	18"	1-60 (303466-0-0)	1-60 (303466-0-0)
	HPV-XL/HPV-XL Plate	18"	1-60 (303458-0-0)	1-60 (303458-0-0)
60"	HPVX/HPVX Plate	12"	1-90 (393577-0-0)	1-90 (393577-0-0)
		6"	1-120 (303576-0-0)	1-150 (303581-0-0)
40-1/2"	HPVX/HPVX Plate	6"	1-165 (303456-0-0)	1-165 (303456-0-0)
		12"	1-105 (303463-0-0)	1-105 (303463-0-0)

FM Approval - Induction Welding Securement Criteria

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

FM Approvals – Induction Welding Securement					
Deck Type	Fastener/Plate	Rating	Fasteners per 4' x 8' Board		
			Zone 1	Zone 2	Zone 3
Min. 22 Gauge Grade C Steel (33 ksi)	HPVX / RhinoBond PVC Plate	1-90 (341113-0-0)	6	9	12
		1-105 (341112-0-0)	8	12	16
		1-165 (387429-0-0)	16	24	32
	HPV-XL / RhinoBond PVC Plate	1-135 (383685-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HPVX / RhinoBond PVC Plate	1-120 (341111-0-0)	8	12	16
	HPVX / RhinoBond PVC Plate	1-195 (387435-0-0)	16	24	32

FM Class A Roof Deck Construction and Insulation Approvals (14)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Deck Type	Insulation	Insulation Thickness	Maximum Slope for ASTM E-108 Class "A" Rating	
			VersiFlex PVC	VersiFlex PVC KEE HP
New Construction/Tear-off: Steel (Minimum 22 gauge) Structural Concrete	Versico Recovery Board or FM Approved High Density Wood Fiberboard	1/2" Min.	1"	2-1/2"
	Versico Recovery Board (min. 1/2"), DensDeck Prime (min. 1/4") or Securock (min. 1/4") Over: FM Approved Insulation (12)	Refer to FM RoofNAV website	5" (with DensDeck Prime overlay)	5" (with DensDeck Prime overlay)
	Versico SecurShield HD or SecurShield HD Plus Over: FM Approved Insulation (12)	1/2" Refer to FM RoofNAV website	1"	2"
Retrofit (No Tear-off) (13): Structural Concrete	Versico Polyisocyanurate VersiCore	1" - 12"	1"	1-1/2"
	Versico Insulfoam SP (12)	2" - 12"	2"	2"
	Versico Recovery Board	1/2" - 1"	1"	2-1/2"
Retrofit (No Tear-off) (13): Steel (Minimum 22 gauge)	Versico SecurShield HD or SecurShield HD Plus	1/2"		
	Versico Polyisocyanurate VersiCore	1" Max.	1"	1-1/2"

VersiFlex™ (PVC) Mechanically-Fastened Roofing System

ANSI-SPRI 4474 Approvals

.050'', .060'' or .080" VersiFlex PVC Reinforced Membrane

Membrane Type: .050", .060'' or .080" VersiFlex KEE HP Reinforced Membrane (120'' only)

Membrane Width	Fastener/Plate (15)	Fastener Spacing	Ratings over Min. 22 Gauge	Ratings over Min. 22 Gauge
			Grade C Steel (30 ksi)	Grade E Steel (80 ksi) or Structural Concrete
120"	HPVX/HPVX Plate	6"	1-75	1-75
	HPV-XL/HPV-XL Plate	12"	1-60	1-60
	HPVX/Oval Barbed	6"	1-90	1-90
81"	HPVX/HPVX Plate	6"	1-105	1-105
		12"	1-75	1-90
	HPV-XL/HPV-XL Plate	12"	1-90	1-90
	HPVX/HPVX Plate	18"	1-60	1-60
	HPV-XL/HPV-XL Plate	18"	1-60	1-60
40-1/2"	HPVX/HPVX Plate	6"	1-165	1-165
		12"	1-120	1-120

VersiFlex™ (PVC) Metal Retrofit Roofing System

Underwriters Laboratories (UL) Approvals

The UL ratings achieved with the Metal Retrofit Roofing System are identical to the approvals listed for the VersiFlex PVC Mechanically-Fastened Roofing System over non-combustible decks depending on the membrane selected.

FM Approvals

As referenced in FM Approvals Loss Prevention Data Sheet 1-31, the method of recovering an existing metal roof system with a single-ply mechanically fastened roofing system where the membrane is secured through the existing metal roof directly to the structural purlins is recognized as an appropriate recovery system when installed per the recommendations of FM.

As a standard FM Approvals requirement, additional membrane and insulation securement is necessary in the corner and/or perimeter areas as outlined in FM Property Loss Prevention Data Sheets 1-28, 1-29 and 1-31. These bulletins should be reviewed in their entirety for specific requirements concerning insulation types, fastening enhancements and other items that may be necessary.

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane (120" only)

FM Approvals – Metal Retrofit

Purlin Spacing	Fastener/Plate	Spacing	Rating	Coverboard	VersiFlex PVC and VersiFlex KEE HP
60 Inches	Purlin/ HPVX Plate	6"	1-105	SecurShield HD / VersiCore HD	379904-0-0
				Recovery Board	
				VersiCore/SecurShield	
				DensDeck/SECUROCK	272712-0-0
		12"	1-90	SecurShield HD / VersiCore HD	281330-0-0
				Recovery Board	
				VersiCore/SecurShield	
				DensDeck/SECUROCK	272720-0-0
		18"	1-60	SecurShield HD / VersiCore HD	281332-0-0
				Recovery Board	
				VersiCore/SecurShield	
				DensDeck/SECUROCK	272723-0-0

FM Approvals – Induction Welding Metal Retrofit

Deck Type	Fastener	Plate	Row Spacing	Fastener Spacing in Rows	Rating	Coverboard	VersiFlex PVC	VersiFlex KEE HP
Structural Steel Purlin (Metal Retrofit)	Purlin	RhinoBond PVC Plate	5'	6"	1-180	SecurShield HD / VersiCore HD	408587-0-0	408587-0-0
						Recovery Board	373493-0-0	373495-0-0
						VersiCore/SecurShield	373491-0-0	373491-0-0
						DensDeck/SECUROCK	373492-0-0	373492-0-0
			5'	12"	1-105	SecurShield HD / VersiCore HD	408586-0-0	408586-0-0
						Recovery Board	373488-0-0	373489-0-0
						VersiCore/SecurShield	373490-0-0	373490-0-0
						DensDeck/SECUROCK	373487-0-0	373487-0-0
			5'	18"	1-75	SecurShield HD / VersiCore HD	408585-0-0	408585-0-0
						Recovery Board	373485-0-0	373486-0-0
						VersiCore/SecurShield	373482-0-0	373482-0-0
						DensDeck/SECUROCK	373479-0-0	373479-0-0
			10'	6"	1-120	SecurShield HD / VersiCore HD	408582-0-0	408582-0-0
						Recovery Board	373480-0-0	373481-0-0
						VersiCore/SecurShield	373482-0-0	373482-0-0
						DensDeck/SECUROCK	373479-0-0	373479-0-0
			10'	12"	1-60	SecurShield HD / VersiCore HD	408564-0-0	408564-0-0
						Recovery Board	373477-0-0	373478-0-0
						VersiCore/SecurShield	372618-0-0	372618-0-0
						DensDeck/SECUROCK	372616-0-0	372616-0-0

VersiFlex™ PVC & KEE HP Adhered Roofing System

UL Approval - Non-Combustible - ANSI/UL 790 Spread of Flame Test (Class A)

Membrane Adhesive: Low VOC PVC Bonding Adhesive, HydroBond Adhesive (VersiFlex PVC Membrane only) or CAV-GRIP PVC

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Non-Combustible: Steel; St. Concrete; Gypsum; Tectum (Min. 2" thick)

System ID	Deck Type	Insulation	Cover Board	Maximum Slope
1	Non-Combustible	VersiCore, or SecurShield- any combination, any thickness	N/A	1-1/2"
2		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SecurShield HD, SecurShield HD Plus or SecurShield HD Composite	1-1/2"
3		Minimum 1" layer of VersiCore or SecurShield over any UL Classified EPS or XPS Insulation, maximum 1.25 pcf, any thickness	N/A	1"
4		Insulfoam HD Composite or Insulfoam HD Composite over Insulfoam EPS, any thickness and density.	N/A	1/2"
5		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" SECUROCK® Gypsum-Fiber Roof Boards	Unlimited
6		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck Prime Roof Boards	Unlimited
7		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" Recovery Board	1-1/2"
8		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 7/16" APA Rated OSB or minimum 1-1/2" DuraFacer	3"
9		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 5/16" DuraStorm VSH	1-1/2"
10	Structural (poured-in-place) concrete	N/A	N/A	1-1/2"
11	Precast concrete with grouted joints	N/A	N/A	1-1/2"

VersiFlex™ PVC & KEE HP Adhered Roofing System

UL Approval - Combustible (1) - ANSI/UL 790 Spread of Flame Test - Class A

Membrane Adhesive: Low VOC PVC Bonding Adhesive, HydroBond Adhesive (VersiFlex PVC Membrane only) or CAV-GRIP PVC

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Combustible: 7/16-in. (minimum) thick non-veneer APA-rated sheathing (oriented strand board panels, structural particleboard panels, composite panels or waferboard panels); 15/32-in. (minimum) thick plywood 3/4 in. (minimum) wood; Tectum (less than 2" thick)

System ID	Thermal Barrier/ Base Sheet	Insulation	Cover Board	Maximum Slope
Combustible (1) - ANSI/UL 790 Spread of Flame Test-Class A				
1	Minimum 1/4" SECUROCK® Gypsum Fiber or Glass Mat Roof Board (2)	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	1-1/2"
2	Minimum 1/4" DensDeck or DensDeck Prime Roof Boards (2)	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	1-1/2"
3	N/A	Minimum 1" thick layer of SecurShield or SecurShield HD Composite is placed directly over a combustible roof deck. An optional layer or layers of any Versico Polyisocyanurate Insulation may be used below the minimum 1" thick top layer, any combination, any thickness. (3)	N/A	1/2"
4	N/A	Minimum 1" thick layer of SecurShield or SecurShield HD Composite over a minimum 3-1/2" thick layer of any UL Classified EPS insulation is placed directly over a combustible roof deck. (3)	N/A	1/2"
5	N/A	OPTIONAL layer or layers of any Versico Polyisocyanurate Insulation may be used below the minimum 1/2" thick top layer, any combination, any thickness. (3)	1/2" thick SecurShield HD or SecurShield HD Plus is placed directly over a combustible roof deck. (3)	1"
6	N/A	Minimum 4" thick layer of any UL Classified EPS insulation is placed directly over a combustible roof deck. (3)	1/2" thick SecurShield HD or SecurShield HD Plus. (3)	1/2"
7	N/A	Minimum 1-1/2" layer of Insulfoam HD Composite over a minimum 3" layer of Insulfoam EPS. (2)	N/A	1/2"
8	N/A	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	Minimum 1/4" SECUROCK® Gypsum Fiber Roof Board (2)	3"
9	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 3/8" SECUROCK® Gypsum Fiber Roof Board (2)	2"
10	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SECUROCK® Gypsum Fiber Roof Board (2)	4"
11	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck Prime Roof Board (2)	Unlimited
12	N/A	Any UL Classified Versico Polyisocyanurate Insulation, any combination, minimum 2" thickness. (2)	Minimum 7/16" DuraStorm VSH	1"
13	Two layers of Versico FR Base Sheet	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	3/4"

VersiFlex™ PVC & KEE HP Adhered Roofing System

UL Approval - Non-Combustible and Combustible (1) - ANSI/UL 790 Spread of Flame Test - Class B

Membrane Adhesive: Low VOC PVC Bonding Adhesive, HydroBond Adhesive (VersiFlex PVC Membrane only) or CAV-GRIP PVC

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
 .050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Combustible: 7/16-in. (minimum) thick non-veneer APA-rated sheathing (oriented strand board panels, structural particleboard panels, composite panels or waferboard panels); 15/32-in. (minimum) thick plywood 3/4 in. (minimum) wood; Tectum (less than 2" thick)

System ID	Thermal Barrier/Base Sheet	Insulation	Cover Board	Maximum Slope
Combustible (1) - ANSI/UL 790 Spread of Flame Test-Class B				
1	One Layer of Versico FR Base Sheet	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	1/2"
Non-Combustible - ANSI/UL 790 Spread of Flame Test-Class B				
2	N/A	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness.	N/A	2-1/2"

VersiFlex™ (PVC) Adhered Roofing System

UL Approval - Combustible and Non-Combustible - ANSI/UL 790 Spread of Flame Test - Class C

Membrane Adhesive: Low VOC PVC Bonding Adhesive, HydroBond Adhesive (VersiFlex PVC Membrane only) or CAV-GRIP PVC

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Combustible: 7/16-in. (minimum) thick non-veneer APA-rated sheathing (oriented strand board panels, structural particleboard panels, composite panels or waferboard panels); 15/32-in. (minimum) thick plywood 3/4 in. (minimum) wood; Tectum (less than 2" thick)

Non-Combustible: Steel, St. Concrete, Gypsum or Tectum (Min. 2" thick)

System ID	Thermal Barrier/Base Sheet	Insulation	Cover Board	Maximum Slope
Non-Combustible or Combustible (1) - ANSI/UL 790 Spread of Flame Test-Class C				
1	N/A	Any UL Classified Versico Polyisocyanurate Insulation, any combination, any thickness. Optionally, any UL Classified insulation, any combination, any thickness may be used below the Versico Polyisocyanurate Insulation.	N/A	Unlimited
2	N/A	Any UL Classified insulation, any combination, any thickness. (OPTIONAL)	Minimum 5/16" DuraStorm VSH (2)	1/2"
3	N/A	1/2" Recovery Board	N/A	1"

FM Approvals
Design "A" Adhered Roofing Systems

SecurShield HD Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
FM Approved	Loose laid	1/2" SecurShield HD	12 (2.67 sq. ft)	1-75	461352-0-0	-
FM Approved	Loose laid	1/2" SecurShield HD	16 (2 sq. ft)	1-90	385920-0-0	385924-0-0
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of DASH	1-90	-	462147-0-0 (LVOC)
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD over 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	354273-0-0	354278-0-0
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of DASH	1-90	353920-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD over 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	354279-0-0 (HydroBond)	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	1/2" SecurShield HD	12" ribbons or Rig Splatter of DASH	1-90	353921-0-0	353925-0-0 (LVOC)
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	1/2" SecurShield HD over 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	354280-0-0	354284-0-0
Min. 2" VersiCore Polyiso	16 (2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of DASH	1-120	454528-0-0	454529-0-0 (TRU GROUND)
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD	6" ribbons or Rig Splatter of DASH	1-135	454532-0-0 (TRU GROUND)	454533-0-0 (TRU GROUND)
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD over 1-1/2" VersiCore Polyiso	6" ribbons or Rig Splatter of DASH	1-135	538587-0-0	-
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD	4" ribbons or Rig Splatter of DASH	1-225	454541-0-0 (TRU GROUND)	454542-0-0 (TRU GROUND)
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD	4" ribbons or Rig Splatter of DASH	1-225	538590-0-0	-
Min. 1-1/2" VersiCore Polyiso	24 (1.33 sq. ft.)	1/2" SecurShield HD	4" ribbons or Rig Splatter of DASH	1-165	446204-0-0	446205-0-0 (LVOC)
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft)	SecurShield HD over VersiCore Polyiso	6" ribbons of DASH	1-90	-	450181-0-0
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and CAV-GRIP 3V or 702 Primer						
Min. 1/2" Dens-Deck Prime or Securock	8 (4 sq. ft)	Min.1/2" SecurShield HD over Min. 1-1/2" VersiCore	12" ribbons or Rig Splatter of DASH	1-90	404126-0-0	404128-0-0 (LVOC)
Min. 1/2" Dens-Deck Prime or Securock	20 (1.6 sq. ft)	Min.1/2" SecurShield HD over Min. 1-1/2" VersiCore	DASH - Rig Splatter	1-135	-	-
Min. 1/2" Dens-Deck Prime or Securock	32 (1 sq. ft)	Min.1/2" SecurShield HD over Min. 1-1/2" VersiCore	DASH - Rig Splatter	1-225	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" Dens-Deck Prime or Securock	8 (4 sq. ft)	Min.1/2" SecurShield HD over Min. 1/2" VersiCore	12" ribbons of DASH	1-90	-	-
Min. 1/2" Dens-Deck Prime or Securock	20 (1.6 sq. ft)	Min.1/2" SecurShield HD over Min. 1/2" VersiCore	6" ribbons of DASH	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG or 120TG Bast Torch Applied						
Min. 1/2" Dens-Deck Prime or Securock	8 (4 sq. ft)	Min.1/2" SecurShield HD over Min. 1/2" VersiCore	12" ribbons of DASH	1-90	-	-
Min. 1/2" Dens-Deck Prime or Securock	20 (1.6 sq. ft)	Min.1/2" SecurShield HD over Min. 1/2" VersiCore	6" ribbons of DASH	1-135	-	-

FM Approvals
Design "A" Adhered Roofing Systems

SecurShield HD Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons or Rig Splatter of DASH	1-225	424763-0-0 (HydroBond)	-
Min. 1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of DASH	1-90	424668-0-0 (Hydrobond)	-
Min. 3/4" OPTIM-R	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-120	438110-0-0 (LVOC)	-
Min. 3/4" OPTIM-R	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-120	438112-0-0 (HydroBond)	438113-0-0 (LVOC)
Min. 2" Insulfoam EPS	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-285	429737-0-0 (HydroBond)	-
Min. 2" Insulfoam EPS	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-285	429725-0-0 (LVOC & CGP)	429726-0-0 (LVOC)
Min. 1-1/2" Insulfoam HD Comp	Full-Coverage DASH	-	-	1-225	424573-0-0 (Hydrobond)	-
Min. 1/2" VersiCore Polyiso	Hot Asphalt	1/2" SecurShield HD	Hot Asphalt	1-240	-	-
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft)	SecurShield HD over VersiCore Polyiso	6" ribbons or Rig Splatter of DASH	1-90	-	450180-0-0
Min. 1/2" VersiCore Polyiso	Loose laid	1/2" SecurShield HD	16 (2 sq. ft.)	1-90	434257-0-0 (LVOC)	434257-0-0 (LVOC)
Min. 2" DeckVent EPS	Loose laid	Min. 2" Insulfoam HD Comp	6" ribbons of DASH	1-90	427788-0-0	427788-0-0
Concrete Deck/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 3/4" Optim-R	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-165 702	437593-0-0 (LVOC)	437597-0-0 (LVOC)
Min. 3/4" Optim-R	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-120 702	437596-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso or Min. 2" Insulfoam EPS	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-255	429729-0-0 (LVOC)	429730-0-0 (LVOC)
					429739-0-0 (HydroBond)	-
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-315	364647-0-0 (LVOC)	364657-0-0 (LVOC)
					424751-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-465	-	-
Concrete Deck /SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-285	519848-0-0 (LVOC)	519849-0-0
					519855-0-0 (Hydrobond)	-
Concrete Deck /SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-240	-	-
Min. 1/2" VersiCore Polyiso or 1-1/2" Securshield	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-225	424798-0-0 (Hydrobond)	-
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-315	-	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons of DASH	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD	12" ribbons or Rig Splatter of DASH	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose laid	1/2" SecurShield HD	12 (2.67 sq. ft)	1-75	-	-
FM Approved	Loose laid	1/2" SecurShield HD	16 (2 sq. ft)	1-90	-	-
-	-	1/2" SecurShield HD	12 (2.67 sq. ft)	1-75	-	-
-	-	1/2" SecurShield HD	16 (2 sq. ft)	1-90	-	-

FM Approvals
Design “A” Adhered Roofing Systems
SecurShield HD Ratings - Recover

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
-	-	1/2" SecurShield HD	12 (2.67 sq. ft)	1-75	-	-
-	-	1/2" SecurShield HD	16 (2 sq. ft)	1-90	395944-0-0	395945-0-0
-	-	1/2" SecurShield HD	6" ribbons of DASH	1-90	-	-
-	-	1/2" SecurShield HD	4" ribbons of DASH	1-150	-	-
Concrete Deck						
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD	6" ribbons of DASH	1-150	-	-
-	-	1/2" SecurShield HD	6" ribbons of DASH	1-150	-	-
Gypsum Deck						
-	-	1/2" SecurShield HD	6" ribbons of DASH	1-90	-	-

FM Approvals
Design "A" Adhered Roofing Systems

SecurShield HD Plus Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" VersiCore Polyiso	Loose laid	1/2" SecurShield HD Plus	8 (4 sq. ft)	1-90	343627-0-0	343628-0-0
FM Approved	Loose laid	1/2" SecurShield HD Plus	18 (1.8 sq. ft)	1-120	371287-0-0 LVOC 369888-0-0 (HydroBond)	371288-0-0
FM Approved	Loose laid	1/2" SecurShield HD Plus	24 (1.33 sq. ft)	1-165	371285-0-0	-
FM Approved	Loose laid	1/2" SecurShield HD Plus	24 (1.33 sq. ft)	1-225 (30)	371286-0-0	-
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of DASH	1-90	345060-0-0 (LVOC) 353920-0-0 (HydroBond)	345061-0-0
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD Plus over Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	354273-0-0 (LVOC) 354279-0-0 (HydroBond)	354278-0-0
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of DASH	1-90	353921-0-0	353925-0-0
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	1/2" SecurShield HD Plus over Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	538586-0-0	354284-0-0
Min. 2" VersiCore Polyiso	16 (2 sq. ft.)	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of DASH	1-120	-	-
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus	6" ribbons or Rig Splatter of DASH	1-135	454532-0-0	-
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over Min. 1-1/2" VersiCore Polyiso	6" ribbons or Rig Splatter of DASH	1-135	538587-0-0	-
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD Plus	4" ribbons or Rig Splatter of DASH	1-225	454541-0-0	-
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD Plus over Min. 1-1/2" VersiCore Polyiso	4" ribbons or Rig Splatter of DASH	1-225	538590-0-0	-
Min. 1-1/2" VersiCore Polyiso	24 (1.33 sq. ft.)	1/2" SecurShield HD Plus	4" ribbons or Rig Splatter of DASH	1-165	446204-0-0	446205-0-0
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	6" ribbons of DASH	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and CAV-GRIP 3V or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	DASH - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	DASH - Rig Splatter	1-225	-	-
Steel Deck (Min. 22 Gauge)/ SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	6" ribbons of DASH	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG or 120TG Base Torch Applied						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	6" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over VersiCore Polyiso	6" ribbons of DASH	1-135	-	-

FM Approvals
Design “A” Adhered Roofing Systems

SecurShield HD Plus Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC		VersiFlex KEE HP (LVOC Only)
					RoofNAV Number		
Concrete Deck							
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of DASH	1-225	387061-0-0 (LVOC) 424761-0-0 (HydroBond)	387338-0-0 -	
Min. 2" Insulfoam EPS	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-285	429725-0-0 (LVOC)	429726-0-0	
Min. 2" Insulfoam EPS	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-285	429737-0-0 (HydroBond)	429726-0-0	
Min. 1/2" VersiCore Polyiso	Loose laid	1/2" SecurShield HD Plus	16 (2 sq. ft.)	1-90	434258-0-0 (LVOC)	434258-0-0 (LVOC)	
Min. 1/2" VersiCore Polyiso	Hot Asphalt	1/2" SecurShield HD Plus	Hot Asphalt	1-240	-	-	
Concrete Deck/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer							
Min. 1/2" VersiCore Polyiso or Min. 2" Insulfoam	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-255	429729-0-0 (LVOC) 429739-0-0 (HydroBond)	429730-0-0 -	
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-315	364647-0-0 (LVOC) 424751-0-0 (HydroBond)	364657-0-0 (LVOC) -	
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD Plus	6" ribbons of DASH	1-465	-	-	
Concrete Deck/SureMB 70 SA with CAV-GRIP 3V Primer							
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-285	519848-0-0 (LVOC) 519855-0-0 (HydroBond)	519849-0-0	
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer							
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-225	393033-0-0 (LVOC)	393038-0-0	
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-225	424798-0-0 (HydroBond)	-	
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD Plus	6" ribbons of DASH	1-315	-	-	
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD Plus	6" ribbons of DASH	1-465	-	-	
Gypsum Deck Tear-Off							
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield HD Plus	12" ribbons of DASH	1-90	-	-	
Gypsum Deck Tear-Off/VapAir Seal 725TR and CAV-GRIP 3V, 702-LV or 702 Primer							
Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of DASH	1-90	-	-	
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)							
FM Approved	Loose laid	1/2" SecurShield HD Plus	12 (2.67 sq. ft)	1-75	-	-	
FM Approved	Loose laid	1/2" SecurShield HD Plus	16 (2 sq. ft)	1-90	-	-	
-	-	1/2" SecurShield HD Plus	12 (2.67 sq. ft)	1-75	-	-	
-	-	1/2" SecurShield HD Plus	16 (2 sq. ft)	1-90	-	-	

FM Approvals
Design “A” Adhered Roofing Systems

SecurShield HD Plus Ratings - Recover

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
-	-	1/2" SecurShield HD Plus	8 (4 sq. ft)	1-90	396132-0-0	396133-0-0
-	-	1/2" SecurShield HD Plus	24 (1.33 sq. ft)	1-225	481548-0-0	481549-0-0
-	-	1/2" SecurShield HD Plus	6" ribbons of DASH	1-90	-	-
-	-	1/2" SecurShield HD Plus	4" ribbons of DASH	1-150	-	-
Concrete Deck						
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" SecurShield HD Plus	6" ribbons of DASH	1-150	-	-
-	-	1/2" SecurShield HD Plus	6" ribbons of DASH	1-150	-	-
Gypsum Deck						
Min. 1-1/2" VersiCore Polyiso	Full-Coverage DASH	1/2" SecurShield HD Plus	Full-Coverage DASH	1-90	-	-

FM Approvals
Design “A” Adhered Roofing Systems

VersiCore Polyiso Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" VersiCore Polyiso	16 (2 sq. ft.)	-	-	1-90	187383-0-0 (LVOC)	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft.)	-	-	1-90	187575-0-0 (LVOC)	345901-0-0
Min. 2" VersiCore Polyiso	8 (4 sq. ft.)	-	-	1-90	345900-0-0 (HydroBond)	NA
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	-	-	1-135	325911-0-0 (LVOC)	325946-0-0
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	1-135	424164-0-0	-
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	Min. 1" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	489975-0-0 (LVOC)	489976-0-0 (LVOC)
Min. 2" VersiCore Polyiso	8 (4 sq. ft.)	Min. 2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	187137-0-0 (LVOC)	187137-0-0
Min. 2" VersiCore Polyiso	16 (2 sq. ft.)	Min. 1" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-105	454530-0-0	454531-0-0
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	Min. 1" VersiCore Polyiso	6" ribbons or Rig Splatter of DASH	1-150	455835-0-0	455836-0-0
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	Min. 1" VersiCore Polyiso	4" ribbons or Rig Splatter of DASH	1-270	455875-0-0	455877-0-0
Min. 1/2" Dens Deck or DensDeck Prime	16 (2 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1-90	181116-0-0 (LVOC)	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR with CAV-GRIP 3V or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	211245-0-0	400229-0-0
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	DASH - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	DASH - Rig Splatter	1-240	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA with CAV-GRIP 3V Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG or 120 TG Base Torch Applied						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1-90	454499-0-0	454400-0-0
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1-135	-	-

FM Approvals
Design “A” Adhered Roofing Systems

VersiCore Polyiso Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1-1/2" VersiCore Polyiso	DASH Full-Coverage	-	-	1-450	424518-0-0 (HydroBond)	-
Min. 1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	-	-	1-285	-	434245-0-0 (LVOC)
Min. 1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	-	-	1-315	424559-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	-	-	1-315	269947-0-0 (LVOC)	-
Min. 1-1/2" VersiCore Polyiso	Hot Asphalt	-	-	1-315	269947-0-0 (LVOC)	-
				1-300	424551-0-0 (HydroBond)	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	424561-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	16 (2 sq. ft.)	Min. 1-1/2" VersiCore Polyiso	Full-Coverage DASH	1-90	424523-0-0 (HydroBond)	-
Min. 1" VersiCore Polyiso	20 (1.6 sq. ft)	-	-	1-90	424552-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	16 (2 sq. ft.)	-	-	1-90	424534-0-0 (HydroBond)	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	-	-	1-90	424562-0-0 (HydroBond)	-
Concrete Deck/VapAir Seal 725 TR and Cav-Grip 3V, 702-LV or 702 Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	-	-	1-255	434244-0-0 (LVOC)	434244-0-0
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	-	-	1-315	462916-0-0	462919-0-0
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	-	-	1-465	462918-0-0	462920-0-0
Concrete Deck/SureMB 70 SA with Cav-Grip 3V Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1-285	519872-0-0	519859-0-0
					519856-0-0 (HydroBond)	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1-315	-	-
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	-	-	1-315	462947-0-0	462949-0-0
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	-	-	1-465	462948-0-0	462950-0-0
Gypsum Deck Tear-Off						
Min. 1-1/2" VersiCore Polyiso	16 (2 sq. ft)	-	-	1-90	-	-
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	-	-	1-90	164217-0-0 (LVOC)	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and Cav-Grip 3V, 702-LV or 702 Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	-	-	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
Min. 1-1/2" VersiCore Polyiso	16 (2 sq. ft)	-	-	1-90	-	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	-	-	1-90	-	-
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft)	-	-	1-150	-	-

FM Approvals
Design "A" Adhered Roofing Systems

VersiCore Polyiso Ratings - Recover

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
1" VersiCore Polyiso	20 (1.6 sq. ft.)	-	-	1-90	164654-0-0 (LVOC)	-
1-1/2" VersiCore Polyiso	16 (2 sq. ft.)	-	-	1-90	475858-0-0	475859-0-0 (LVOC)
1" VersiCore Polyiso	6" ribbons of DASH	-	-	1-90	-	-
Concrete Deck						
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	-	-	1-90	303378-0-0 (LVOC)	-
Gypsum Deck						
1-1/2" VersiCore Polyiso	16 (2 sq. ft.)	-	-	1-90	371869-0-0 (LVOC)	371870-0-0
1-1/2" VersiCore Polyiso	16 (2 sq. ft.)	-	-	1-90	466940-0-0 (HydroBond)	-
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	-	-	1-90	467861-0-0 (LVOC)	467865-0-0 (LVOC)

FM Approvals
Design "A" Adhered Roofing Systems

SecurShield and SecurShield HD Composite Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" SecurShield or SecurShield HD Comp.	16 (2 sq. ft.)	-	-	1-90	-	-
Min. 2" SecurShield or SecurShield HD Comp.	8 (4 sq. ft.)	-	-	1-90	345915-0-0 (HydroBond)	-
Min. 2" SecurShield or SecurShield HD Comp.	20 (1.6 sq. ft.)	-	-	1-135	143333-0-0	-
Min. 2" SecurShield or SecurShield HD Comp.	32 (1 sq. ft.)	-	-	1-225 (30)	325903-0-0	399391-0-0
Min. 2" SecurShield or SecurShield HD Comp.	32 (1 sq. ft.)	-	-	1-225 (30)	424166-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1-1/2" SecurShield or 2" SecurShield HD Comp.	12" ribbons or Rig Splatter of DASH	1-90	-	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft.)	Min. 2" SecurShield HD Comp.	12" ribbons or Rig Splatter of DASH	1-90	461415-0-0	-
Min. 2" VersiCore Polyiso	16 (2 sq. ft.)	Min. 1/2" SecurShield Polyiso	12" ribbons or Rig Splatter of DASH	1-105	454530-0-0	454531-0-0
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	Min. 1" SecurShield Polyiso	6" ribbons or Rig Splatter of DASH	1-150	455835-0-0	455836-0-0
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	Min. 1" SecurShield Polyiso	4" ribbons of DASH	1-270	455875-0-0	455877-0-0
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	12" ribbons of DASH	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and CAV-GRIP 3V or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	12" ribbons of DASH	1-90	400813-0-0	400819-0-0
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	DASH - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	DASH - Rig Splatter	1-240	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	6" ribbons of DASH	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG or 120TG Base Torch Applied						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1-1/2" SecurShield	12" ribbons of DASH	1-90	454499-0-0	454500-0-0
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	6" ribbons of DASH	1-135	-	-
Concrete Deck						
Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	Min. 1-1/2" SecurShield	12" ribbons or Rig Splatter of DASH	1-225	424569-0-0 (HydroBond)	-
Min. 1-1/2" SecurShield	12" ribbons or Rig Splatter of DASH	-	-	1-225	424570-0-0 (HydroBond)	-
Min. 1/2" SecurShield or SecurShield HD Comp.	Hot Asphalt	-	-	1-300	-	-

FM Approvals
Design "A" Adhered Roofing Systems

SecurShield and SecurShield HD Composite Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 2" SecurShield or SecurShield HD Comp.	Full-Coverage FAST	-	-	1-255	434244-0-0 (LVOC)	434244-0-0 (LVOC)
Min. 1/2" SecurShield	6" ribbons of DASH	-	-	1-315	462916-0-0	462919-0-0
Min. 1-1/2" SecurShield	6" ribbons of DASH	-	-	1-465	462918-0-0	462920-0-0
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" SecurShield HD Comp.	12" ribbons of DASH	1-255	400838-0-0	400832-0-0
Concrete Deck/SureMB 70 SA with CAV-GRIP 3V Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield or SecurShield HD Comp.	12" ribbons of DASH	1-285	-	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" SecurShield or SecurShield HD Comp.	12" ribbons of DASH	1-330	-	-
Min. 1/2" SecurShield	6" ribbons of DASH	-	-	1-315	-	-
Min. 1-1/2" SecurShield	6" ribbons of DASH	-	-	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" SecurShield or SecurShield HD Comp.	16 (2 sq. ft)	-	-	1-90	-	-
Min. 1-1/2" SecurShield or SecurShield HD Comp.	12" ribbons of DASH	-	-	1-90	164217-0-0	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1-1/2" SecurShield or SecurShield HD Comp.	12" ribbons or Rig Splatter of DASH	-	-	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
Min. 1-1/2" SecurShield or SecurShield HD Comp.	16 (2 sq. ft)	-	-	1-75	-	-
Min. 2" SecurShield or SecurShield HD Comp.	8 (4 sq. ft)	-	-	1-90	-	-
Min. 2" SecurShield or SecurShield HD Comp.	20 (1.6 sq. ft.)	-	-	1-150	-	-
Min. 2" SecurShield or SecurShield HD Comp.	32 (1 sq. ft.)	-	-	1-225	-	-

FM Approvals
Design “A” Adhered Roofing Systems
SecurShield Ratings - Recover

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
1" SecurShield	20 (1.6 sq. ft)	-	-	1-90	-	-
Concrete Deck						
1/2" SecurShield	12" ribbons of DASH	-	-	1-90	-	-
Gypsum Deck						
1" SecurShield	20 (1.6 sq. ft)	-	-	1-90	-	-
1" SecurShield	Full-Coverage DASH	-	-	1-90	-	-

FM Approvals
Design "A" Adhered Roofing Systems

Securock Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
FM Approved	Loose laid	Min. 1/4" Securock	12 (2.66 sq. ft) SecurFAST Plate	1-75	345921-0-0 (HydroBond)	
					211999-0-0 (LVOC)	-
FM Approved	Loose laid	Min. 1/2" Securock	10 (3.2 sq. ft)	1-90	345911-0-0 (HydroBond)	350400-0-0
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/4" Securock	10 (3.2 sq. ft) SecurFAST Plate	1-90	345909-0-0 (HydroBond)	
					212271-0-0 (LVOC)	-
FM Approved	Loose laid	Min. 5/8" Securock	8 (4 sq. ft)	1-90	345913-0-0 (HydroBond)	350401-0-0
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	8 (4 sq. ft) SecurFAST Plate	1-90	319026-0-0	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	6 (5.33 sq. ft) SecurFAST Plate	1-75	-	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 5/8" Securock	6 (5.33 sq. ft) SecurFAST Plate	1-90	212009-0-0	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	20 (1.6 sq. ft)	1-165	424163-0-0 (HydroBond)	-
					325914-0-0 (LVOC)	325947-0-0
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	32 (1 sq. ft)	1-285	424162-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	32 (1 sq. ft)	1-225	399395-0-0 (LVOC)	399399-0-0 (LVOC)
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	Min. 1/4" Securock	12" ribbons or Rig Splatter of DASH	1-90	403963-0-0 (LVOC)	408074-0-0 (LVOC)
Min. 1-1/2" VersiCore Polyiso	8 (4 sq. ft)	Min. 1/4" Securock	12" ribbons or Rig Splatter of DASH	1-90	187180-0-0 (LVOC)	-
Min. 1-1/2" VersiCore Polyiso	18 (1.8 sq. ft.)	Min. 1/4" Securock	6" ribbons or Rig Splatter of DASH	1-105	-	-
Min. 2" VersiCore Polyiso	16 (2 sq. ft.)	Min. 1/2" Securock	12" ribbons or Rig Splatter of DASH	1-120	455775-0-0	455775-0-0
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	Min. 1/2" Securock	6" ribbons or Rig Splatter of DASH	1-135	455742-0-0	455742-0-0
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	Min. 1/2" Securock	4" ribbons or Rig Splatter of DASH	1-225	455817-0-0	455817-0-0
Min. 1-1/2" VersiCore Polyiso	24 (1.33 sq. ft.)	Min. 1/4" Securock	4" ribbons or Rig Splatter of DASH	1-165	455814-0-0 (LVOC)	455814-0-0 (LVOC)
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	Min. 1/4" Securock over VersiCore Polyiso	12" ribbons of DASH	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and CAV-GRIP 3V or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" Securock over Min. 1- 1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	386902-0-0 (HydroBond)	
					387333-0-0 (LVOC)	387334-0-0 (LVOC)
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" Securock over Min. 1" Insulfoam EPS	6" ribbons of DASH	1-90	502785-0-0	502785-0-0
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and CAV-GRIP 3V						
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" Securock over Min. 1- 1/2" VersiCore Polyiso	DASH - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	1/2" Securock over Min. 1- 1/2" VersiCore Polyiso	DASH - Rig Splatter	1-225	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG or 120TG Base Torch Applied						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" Securock over Min. 1- 1/2" VersiCore Polyiso	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/4" Securock over Min. 1- 1/2" VersiCore Polyiso	6" ribbons of DASH	1-135	-	-

FM Approvals
Design "A" Adhered Roofing Systems

Securock Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" Securock	12" ribbons or Rig Splatter of DASH	1-120	424738-0-0 (HydroBond)	-
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" Securock	12" ribbons or Rig Splatter of DASH	1-285	429656-0-0 (LVOC)	-
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" Securock	12" ribbons or Rig Splatter of DASH	1-225	400710-0-0 (LVOC)	400711-0-0 (LVOC)
FM Approved	Loose laid	Min. 1/2" Securock	10 (3.2 sq. ft.)	1-90	395790-0-0	-
Min. 1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	10 (3.2 sq. ft.)	1-90	424818-0-0	398874-0-0
Min. 1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	20 (1.6 sq. ft.)	1-150	424819-0-0	398909-0-0
Min. 1/2" VersiCore Polyiso	Loose laid	Min. 1/2" Securock	32 (1 sq. ft.)	1-270	424821-0-0	398910-0-0
Concrete Deck/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" Securock	12" ribbons of DASH	1-315	424744-0-0 (Hydrobond)	-
					364510-0-0 (LVOC)	364511-0-0
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 1/4" Securock	6" ribbons of DASH	1-315	-	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 1/4" Securock	6" ribbons of DASH	1-465	-	-
Concrete Deck/SureMB 70 SA with CAV-GRIP 3V Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" Securock	12" ribbons of DASH	1-285	519840-0-0	519841-0-0
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" Securock	12" ribbons of DASH	1-330	424801-0-0 (HydroBond)	394638-0-0
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 1/4" Securock	6" ribbons of DASH	1-315	-	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 1/4" Securock	6" ribbons of DASH	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" Securock	12" ribbons of DASH	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	Min. 1/4" Securock	12" ribbons or Rig Splatter of DASH	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
Celcore						
FM Approved	Loose laid	Min. 1/4" Securock	12 (2.67 sq. ft.)	1-75	-	-
FM Approved	Loose laid	Min. 1/2" Securock	10 (3.2 sq. ft.)	1-90	-	-
FM Approved	Loose laid	Min. 5/8" Securock	8 (4 sq. ft.)	1-90	-	-
FM Approved	Loose laid	Min. 1/2" Securock	20 (1.6 sq. ft.)	1-150	-	-
FM Approved	Loose laid	Min. 1/2" Securock	32 (1 sq. ft.)	1-225	-	-

FM Approvals
Design "A" Adhered Roofing Systems

Securock Ratings - Recover

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 2" VersiCore Polyiso	Hot Asphalt	Min. 1/4" Securock	Hot Asphalt	1-495	303398-0-0 (LVOC)	303398-0-0
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 1/4" Securock	6" ribbons of DASH	1-150	-	-

FM Approvals
Design “A” Adhered Roofing Systems

DensDeck Prime Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
FM Approved	Loose laid	Min. 1/4" DensDeck Prime	12 (2.67 sq. ft)	1-90	345893-0-0 (HydroBond)	-
FM Approved	Loose laid	Min. 1/2" DensDeck Prime	10 (3.2 sq. ft)	1-90	345920-0-0 (HydroBond)	379949-0-0
FM Approved	Loose laid	Min. 1/2" DensDeck Prime	20 (1.6 sq. ft)	1-105	345904-0-0 (HydroBond)	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" DensDeck Prime	8 (4 sq.ft)	1-90	388252-0-0	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/4" DensDeck Prime	18 (1.8 sq. ft)	1-105	382311-0-0	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" DensDeck Prime	18 (1.8 sq. ft)	1-135	383701-0-0	396259-0-0
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" DensDeck Prime	20 (1.6 sq. ft)	1-150	383711-0-0	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-165	387932-0-0	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-180 (29)	384597-0-0	-
Min. 1-1/2" VersiCore Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-255 (30)	387933-0-0	510376-0-0
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of DASH	1-90	403961-0-0 (LVOC)	403961-0-0 (LVOC)
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of DASH	1-90	187145-0-0 (LVOC)	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of DASH	1-90	428869-0-0 (HydroBond)	-
Min. 2" VersiCore Polyiso	16 (2 sq. ft.)	Min. 1/2" DensDeck Prime	12" ribbons or Rig Splatter of DASH	1-120	455774-0-0	455774-0-0
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	Min. 1/2" DensDeck Prime	6" ribbons or Rig Splatter of DASH	1-135	455741-0-0	455741-0-0
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	Min. 1/2" DensDeck Prime	4" ribbons or Rig Splatter of DASH	1-165	455812-0-0 (LVOC)	455812-0-0 (LVOC)
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	Min. 1/4" DensDeck Prime over VersiCore Polyiso	12" ribbons of DASH	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and CAV-GRIP 3V or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" DensDeck Prime over VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	1-90	400374-0-0 (HydroBond)	400351-0-0 (LVOC)
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" DensDeck Prime over Insulfoam EPS	6" ribbons of DASH	1-90	502785-0-0	502785-0-0
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1/2" DensDeck Prime over VersiCore Polyiso	DASH - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	Min. 1/2" DensDeck Prime over VersiCore Polyiso	DASH - Rig Splatter	1-240	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" DensDeck Prime over VersiCore Polyiso	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1/4" DensDeck Prime over VersiCore Polyiso	6" ribbons of DASH	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG and 120TG Base Torch Applied						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft)	Min. 1/4" DensDeck Prime over VersiCore Polyiso	12" ribbons of DASH	1-90	458442-0-0	470109-0-0 (LVOC)
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1/4" DensDeck Prime over VersiCore Polyiso	6" ribbons of DASH	1-135	-	-

FM Approvals
Design "A" Adhered Roofing Systems

DensDeck Prime Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of DASH	1-315	345857-0-0	-
Min. 1/2" VersiCore Polyiso	Hot Asphalt	Min. 1/4" DensDeck Prime	Hot Asphalt	1-300	-	-
Min. 1" VersiCore Polyiso	Loose laid	Min. 5/8" DensDeck Prime	8 (4 sq. ft)	1-90	424540-0-0	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	Full-Coverage DASH	1-90	424532-0-0	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of DASH	1-90	424531-0-0	-
Concrete Deck/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" DensDeck Prime	12" ribbons of DASH	1-255	424748-0-0	-
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" DensDeck Prime	12" ribbons of DASH	1-315	364642-0-0	364511-0-0
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 1/4" DensDeck Prime	6" ribbons of DASH	1-465	-	-
Concrete Deck/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" DensDeck Prime	12" ribbons of DASH	1-285	519847-0-0	519841-0-0
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" DensDeck Prime	12" ribbons of DASH	1-330	424803-0-0 (Hydrobond)	394638-0-0
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" DensDeck Prime	12" ribbons of DASH	1-315	-	393037-0-0
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 1/4" DensDeck Prime	6" ribbons of DASH	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 1/4" DensDeck Prime	12" ribbons of DASH	1-90	164605-0-0	-
Gypsum Deck Tear-Off/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons or Rig Splatter of DASH	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of DASH	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose laid	Min. 1/4" DensDeck Prime	12 (2.67 sq. ft)	1-90	-	-
FM Approved	Loose laid	Min. 1/2" DensDeck Prime	10 (3.2 sq. ft)	1-90	-	-
FM Approved	Loose laid	Min. 5/8" DensDeck Prime	8 (4 sq. ft)	1-90	-	-

FM Approvals
Design “A” Adhered Roofing Systems

DensDeck Prime Ratings - Recover

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
-	-	1/2" DensDeck Prime	6" ribbons of DASH	1-135	458985-0-0	458985-0-0
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/4" DensDeck Prime	12" ribbons of DASH	1-90	-	-

FM Approvals
Design “A” Adhered Roofing Systems

DuraFaceR Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
FM Approved	Loose Laid	Min. 2" DuraFacer	17 (1.8 sq. ft)	1-135	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and CAV-GRIP 3V or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" DuraFacer	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" DuraFacer	6" ribbons of DASH	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" DuraFacer	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" DuraFacer	6" ribbons of DASH	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG and 120TG Base Torch Applied						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" DuraFacer	12" ribbons of DASH	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" DuraFacer	6" ribbons of DASH	1-135	-	-
Concrete Deck						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" DuraFacer	12" ribbons of DASH	1-360	342089-0-0 (LVOC)	-
					424575-0-0 (HydroBond)	-
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" DuraFacer	12" ribbons of DASH	1-315	-	-
Concrete Deck/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" DuraFacer	12" ribbons of DASH	1-255	-	-
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 2" DuraFacer	6" ribbons of DASH	1-315	-	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 2" DuraFacer	6" ribbons of DASH	1-360	-	-
Concrete Deck/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" DuraFacer	12" ribbons of DASH	1-285	-	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" DuraFacer	12" ribbons of DASH	1-330	-	-
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 2" DuraFacer	6" ribbons of DASH	1-315	-	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 2" DuraFacer	6" ribbons of DASH	1-360	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" DuraFacer	12" ribbons of DASH	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						

FM Approvals
Design “A” Adhered Roofing Systems

DuraFaceR Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	Min. 2" DuraFacer	12" ribbons of DASH	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose Laid	Min. 2" DuraFacer	17 (1.8 sq. ft)	1-135	-	-

FM Approvals
Design “A” Adhered Roofing Systems

DuraFacer Rating - Recover

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	Min. 2" DuraFacer	6" ribbons of DASH	1-150	-	-

FM Approvals
Design “A” Adhered Roofing Systems

Recovery Board Ratings - New Construction

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
.050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC)

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
FM Approved	Loose laid	Min. 1/2" Recovery Board	16 (2 sq. ft)	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose laid	Min. 1/2" Recovery Board	16 (2 sq. ft)	1-90	-	-

FM Approvals

DuraStorm VSH Ratings - New Construction (SH RATINGS ONLY)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
 .050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" VersiCore Polyiso	Loose laid	1/2" DuraStorm VSH	8 (4 sq. ft)	1-90	-	-
FM Approved	Loose laid	1/2" DuraStorm VSH	18 (1.8 sq. ft)	1-120	-	-
FM Approved	Loose laid	1/2" DuraStorm VSH	32 (1 sq. ft)	1-165	518805-0-0	-
FM Approved	Loose laid	1/2" DuraStorm VSH	24 (1.33 sq. ft)	1-225 (30)	-	-
FM Approved	Loose laid	1/2" DuraStorm VSH	32 (1 sq. ft)	1-270 (30)	518806-0-0	-
Min. 1-1/2" VersiCore Polyiso	10 (3.2 sq. ft.)	1/2" DuraStorm VSH	6" ribbons of DASH	1-90	-	-
Min. 2" VersiCore Polyiso	8 (4 sq. ft)	1/2" DuraStorm VSH	6" ribbons of DASH	1-90	-	-
Min. 2" VersiCore Polyiso	16 (2 sq. ft.)	1/2" DuraStorm VSH	12" ribbons of DASH	1-120	-	-
Min. 2" VersiCore Polyiso	20 (1.6 sq. ft.)	1/2" DuraStorm VSH	6" ribbons of DASH	1-135	-	-
Min. 2" VersiCore Polyiso	32 (1 sq. ft.)	1/2" DuraStorm VSH	4" ribbons of DASH	1-225	-	-
Min. 1-1/2" VersiCore Polyiso	24 (1.33 sq. ft.)	1/2" DuraStorm VSH	4" ribbons of DASH	1-165	-	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	1/2" DuraStorm VSH over VersiCore Polyiso	6" ribbons of DASH	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and CAV-GRIP 3V or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" DuraStorm VSH over VersiCore Polyiso	6" ribbons of DASH	1-90	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" DuraStorm VSH over VersiCore Polyiso	6" ribbons of DASH	1-90	-	-
Steel Deck (Min. 22 Gauge)/SureMB 90TG or 120TG Base Torch Applied						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" DuraStorm VSH over VersiCore Polyiso	6" ribbons of DASH	1-90	-	-

FM Approvals

DuraStorm VSH Ratings - New Construction (SH RATINGS ONLY)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
 .050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer (Max. thickness 36")	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" DuraStorm VSH	12" ribbons of DASH	1-225	-	-
					-	-
Min. 2" Insulfoam EPS	12" ribbons of DASH	1/2" DuraStorm VSH	12" ribbons of DASH	1-285	-	-
Min. 1/2" VersiCore Polyiso	Loose laid	1/2" DuraStorm VSH	16 (2 sq. ft.)	1-90		-
Concrete Deck/VapAir Seal 725 TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1/2" VersiCore Polyiso or Min. 2" Insulfoam	12" ribbons of DASH	1/2" DuraStorm VSH	12" ribbons of DASH	1-255	-	-
					-	-
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" DuraStorm VSH	6" ribbons of DASH	1-315	-	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" DuraStorm VSH	6" ribbons of DASH	1-465	-	-
Concrete Deck/SureMB 70 SA and CAV-GRIP 3V Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" DuraStorm VSH	12" ribbons of DASH	1-285	519875-0-0	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" DuraStorm VSH	12" ribbons of DASH	1-225	-	-
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" DuraStorm VSH	6" ribbons of DASH	1-315	-	-
Min. 1-1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" DuraStorm VSH	6" ribbons of DASH	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" DuraStorm VSH	12" ribbons of DASH	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and CAV-GRIP 3V, 702-LV or 702 Primer						
Min. 1-1/2" VersiCore Polyiso	12" ribbons of DASH	1/2" DuraStorm VSH	12" ribbons of DASH	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose laid	1/2" DuraStorm VSH	12 (2.67 sq. ft)	1-75	-	-
FM Approved	Loose laid	1/2" DuraStorm VSH	16 (2 sq. ft)	1-90	-	-
-	-	1/2" DuraStorm VSH	12 (2.67 sq. ft)	1-75	-	-
-	-	1/2" DuraStorm VSH	16 (2 sq. ft)	1-90	-	-

FM Approvals

DuraStorm VSH Ratings - Recover (SH RATINGS ONLY)

Membrane Type: .050", .060" or .080" VersiFlex PVC Reinforced Membrane
 .050", .060" or .080" VersiFlex KEE HP Reinforced Membrane

Membrane Adhesive: Low VOC PVC Bonding Adhesive (LVOC) CAV-GRIP PVC (CGP) or HydroBond Water-Based PVC Bonding Adhesive (HydroBond)

Base and Top Layer Adhesive: DASH = Flexible DASH and Flexible DASH Dual Tank

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 25, 26 & 27)	Rating	VersiFlex PVC	VersiFlex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
-	-	1/2" DuraStorm VSH	8 (4 sq. ft)	1-90	-	-
-	-	1/2" DuraStorm VSH	6" ribbons of DASH	1-150	-	-
Concrete Deck						
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" DuraStorm VSH	6" ribbons of DASH	1-150	-	-
-	-	1/2" DuraStorm VSH	6" ribbons of DASH	1-150	-	-
Gypsum Deck						
Min. 1/2" VersiCore Polyiso	6" ribbons of DASH	1/2" DuraStorm VSH	6" ribbons of DASH	1-90	-	-

NATIONAL, STATE & CITY BUILDING CODE APPROVALS

Authority	Approval #
ICC – International Code Council	Report ESR-1463

State of Florida Evaluation Report

Evaluation Report Number	Evaluation Report Use
FL-14318	Not for use in High Velocity Hurricane Zone area
FL-14318	For use in High Velocity Hurricane Zone area

Dade County (South Florida) Approvals Expires August, 2026

Deck Type	Acceptance #
Wood	21-0409.07
Steel	21-0409.06
Structural Concrete	21-0409.03
Cementitious Wood Fiber	21-0409.05
Gypsum	21-0409.02
Recover	21-0409.04

Versico Roofing Systems, a division of Carlisle Construction Materials LLC, P. O. Box 7000, Carlisle, PA 17013

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VersiFlex™ (PVC)

Reference Notes

1. Any roof covering system listed for use over a combustible roof deck can be installed over a non-combustible roof deck and achieve the same classification.
2. All insulation joints must be staggered a minimum of 6 inches from the deck joints or from the insulation joints directly below.
3. All insulation joints must be staggered a minimum of 12 inches from the deck joints or from the insulation joints directly below.
4. DELETED
5. DELETED
6. DELETED
7. DELETED
8. DELETED
9. DELETED
10. On Steel Deck (Min. 22 Gauge), HPVX Fasteners and HPVX Plates or HPV-XL Fasteners and HPV-XL Plates are required as identified in this chart.
On structural concrete decks, CD-10, MP Concrete Spikes or MP 14-10 Fasteners are used with HPVX Plates.
11. Testing conducted on FM approved 22-gauge Grade E Steel Deck (Min. 22 Gauge) meeting ASTM Designation A611 or A653 Grade 80.

FM Approval - Field Sheet Securement and Induction Welding Securement Criteria for VersiCore and SecurShield

FM Approval - Field Sheet Securement & Induction Welding Securement Criteria for VersiCore & SecurShield Recover

FM Approval - Field Sheet Securement and Induction Welding Securement Criteria for Dens Deck & Securock

FM Approval - Field Sheet Securement and Induction Welding Securement Criteria for SecurShield HD

FM Approval - Field Sheet Securement and Induction Welding Securement Criteria for SecurShield HD Recover

17. DELETED
18. DELETED
19. DELETED
20. DELETED
21. DELETED
22. DELETED
23. DELETED
24. DELETED
25. HPV fastener/Insulation plate.
26. InsulTITE fastener/Insulation plate.
27. InsulTITE fastener/SecurFAST Insulation Fastening plate.
28. DELETED
29. 80 ksi with one fastener per attachment point.
30. 80 ksi with two fasteners per attachment point.