Sure-Flex™ PVC
Roofing Systems

Code Approval Guide

November 2025

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Carlisle SynTec Systems, a division of Carlisle Construction Materials LLC

CODE APPROVAL GUIDE

November 2025

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 Carlisle's Sure-Flex 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 Carlisle's FleeceBACK™, Hot Mopped, Sure-Weld and Sure-Seal® 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 Carlisle Roofing System can be identified in the respective Carlisle 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 HP Recovery Board/Polyisocyanurate indicates the HP 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 Carlisle published specifications reflect the minimum requirements necessary to obtain the applicable Carlisle warranty. Code requirements are not specifically covered in the Carlisle specifications and are considered to be above and beyond the provisions of the Carlisle 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 Carlisle 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 Carlisle.

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 Carlisle 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 Carlisle Technical Representative to ensure compliance with Carlisle's current specification requirements for the issuance of the applicable warranty. However, this inspection is not for the purpose of verifying code compliance.

Sure-Flex™ PVC & KEE HP Mechanically-Fastened Roofing System

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050'', .060'' or .080'' Sure-Flex 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	InsulBase, 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 InsulBase 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 & Ultralight 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 1/4" DEXcell Glass Mat/DEXcell FA Glass Mat Roof Boards	Unlimited
9		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" HP Recovery Board	1"
10		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 7/16" APA Rated OSB or Minimum 1-1/2" StormBase	1"
11		Any UL Classified Carlisle Polyisocyanurate Insulation- any combination, any thickness (OPTIONAL)	1/2" InsulBase HD	2-1/2"
12		Any UL Classified Insulation, any thickness (OPTIONAL)	Min. 5/16" EcoStorm VSH	2-1/2"
13		Any UL Classified Insulation, any combination, any thickness	Carlisle FR Base Sheet	1"
14	**Structural (poured-in-place) concrete**	N/A	N/A	1"
15	**Precast concrete with grouted joints**	N/A	N/A	1"

Sure-Flex™ PVC & KEE HP Mechanically-Fastened Roofing System

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050'', .060'' or .080'' Sure-Flex 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 Ultralight Glass Mat Roof Board (2)	Any UL Classified Carlisle 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 Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	2-1/2"
3	Minimum 1/4"DEXcell Glass Mat or DEXcell FA Glass Mat Roof Boards (2)	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	2-1/2"
4	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 Carlisle Polyisocyanurate Insulation may be used below the minimum 1" thick top layer, any combination, any thickness. (3)	N/A	1/2"
5	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"
6	N/A	OPTIONAL layer or layers of any Carlisle 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"
7	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"
8	N/A	Minimum 1-1/2" layer of Insulfoam HD Composite over a minimum 3" layer of Insulfoam EPS. (2)	N/A	1/2"
9	N/A	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	Minimum 1/4" SECUROCK® Gypsum Fiber Roof Board (2)	3"
10	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 3/8" SECUROCK® Gypsum Fiber Roof Board (2)	2"
11	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SECUROCK® Gypsum Fiber Roof Board (2)	4"
12	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" SECUROCK® Glass-Mat or Ultralight Coated Glass Mat Roof Boards (2)	Unlimited
13	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck/DensDeck Prime Roof Board (2)	Unlimited
14	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DEXcell Glass Mat/DEXcell FA Glass Mat Roof Board (2)	Unlimited
15	Two layers of Carlisle FR Base Sheet	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness. (OPTIONAL)	N/A	3/4"

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050'', .060'' or .080'' Sure-Flex 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 Carlisle FR Base Sheet	Any UL Classified Carlisle 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 Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	Unlimited

Sure-Flex™ PVC & KEE HP Mechanically-Fastened Roofing System

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050'', .060'' or .080'' Sure-Flex 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 Carlisle Polyisocyanurate Insulation, any combination, any thickness. Optionally, any UL Classified insulation, any combination, any thickness may be used below the Carlisle Polyisocyanurate Insulation.	N/A	Unlimited
2	N/A	Any UL Classified insulation, any combination, any thickness (OPTIONAL)	Min. 5/16" EcoStorm VSH (2)	1/2"
3	N/A	1/2" Min. HP 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 Carlisle 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"

Sure-Flex™ (PVC) Mechanically-Fastened Roofing System for InsulBase and SecurShield
Factory Mutual (FM) Approvals

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex KEE HP Reinforced Membrane (120'' only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge Grade C Steel (33 ksi)	FM Ratings over Min. 22 Gauge Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HP-X/Piranha	6"		**1-75** (307057-0-0)
	HP-Xtra/Piranha Xtra	12"		**1-60** (307052-0-0)
	HP-X/Oval Barbed	6"		**1-90** (323786-0-0)
81"	HP-X/Piranha	6"		**1-105** (143334-0-0)
		12"	**1-75** (143339-0-0)	**1-90** (143340-0-0)
	HP-Xtra/Piranha Xtra	12"	**1-75** (336447-0-0)	**1-90** (143337-0-0)
	HP-X/Piranha	18"	**1-60** (143349-0-0)	**1-60** (143349-0-0)
	HP-Xtra/Piranha Xtra	18"	**1-60** (143336-0-0)	**1-60** (143336-0-0)
60"	HP-X/Piranha	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"	HP-X/Piranha	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" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex 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)	HP-X / 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
	HP-Xtra / RhinoBond PVC Plate	1-135 (346217-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HP-X / RhinoBond PVC Plate	1-120 (341108-0-0)	8	12	16
	HP-X / 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)	HP-X	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)

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex KEE HP Reinforced Membrane (120'' only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge Grade C Steel (33 ksi)	FM Ratings over Min. 22 Gauge Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HP-X/Piranha	6"		**1-75**
	HP-Xtra/Piranha Xtra	12"		**1-60**
	HP-X/Oval Barbed	6"		**1-90**
81"	HP-X/Piranha	6"		**1-105** (303455-0-0)
		12"	**1-75** (380198-0-0)	**1-90** (303465-0-0)
	HP-Xtra/Piranha Xtra	12"	**1-75**	**1-90** (303462-0-0)
	HP-X/Piranha	18"	**1-60** (303466-0-0)	**1-60** (303466-0-0)
	HP-Xtra/Piranha Xtra	18"	**1-60** (303458-0-0)	**1-60** (303458-0-0)
60"	HP-X/Piranha	12"	**1-90** (393577-0-0)	**1-90** (393577-0-0)
		6"	**1-120** (393576-0-0)	**1-150** (393581-0-0)
40-1/2"	HP-X/Piranha	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" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex 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)	HP-X / 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
	HP-Xtra / RhinoBond PVC Plate	1-135 (383685-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HP-X / RhinoBond PVC Plate	1-120 (341111-0-0)	8	12	16
	HP-X / RhinoBond PVC Plate	1-195 (387435-0-0)	16	24	32

Sure-Flex™ (PVC) Mechanically-Fastened Roofing System for DensDeck, Securock and DEXcell Glass Mat
Factory Mutual (FM) Approvals

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex KEE HP Reinforced Membrane (120'' only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge Grade C Steel (33 ksi)	FM Ratings over Min. 22 Gauge Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HP-X/Piranha	6"		**1-75**
	HP-Xtra/Piranha Xtra	12"		**1-60**
	HP-X/Oval Barbed	6"		**1-90**
81"	HP-X/Piranha	6"		**1-105** (236903-0-0)
		12"	**1-75** (237573-0-0)	**1-90** (237591-0-0)
	HP-Xtra/Piranha Xtra	12"	**1-75**	**1-90** (236919-0-0)
	HP-X/Piranha	18"	**1-60** (237596-0-0)	**1-60** (237596-0-0)
	HP-Xtra/Piranha Xtra	18"	**1-60** (236915-0-0)	**1-60** (236915-0-0)
60"	HP-X/Piranha	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"	HP-X/Piranha	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" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex 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)	HP-X / 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
	HP-Xtra / RhinoBond PVC Plate	1-135 (346233-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HP-X / RhinoBond PVC Plate	1-120 (341228-0-0)	8	12	16
	HP-X / 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)	HP-X	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)

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex KEE HP Reinforced Membrane (120'' only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge Grade C Steel (33 ksi)	FM Ratings over Min. 22 Gauge Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HP-X/Piranha	6"		**1-75**
	HP-Xtra/Piranha Xtra	12"		**1-60**
	HP-X/Oval Barbed	6"		**1-90**
81"	HP-X/Piranha	6"	**1-75** (333705-0-0)	**1-105** (280570-0-0)
		12"	**1-75** (281249-0-0)	**1-90** (281250-0-0)
	HP-Xtra/Piranha Xtra	12"	**1-75** (337160-0-0)	**1-90** (281247-0-0)
	HP-X/Piranha	18"	**1-60** (281251-0-0)	**1-60** (281251-0-0)
	HP-Xtra/Piranha Xtra	18"	**1-60** (281246-0-0)	**1-60** (281246-0-0)
60"	HP-X/Piranha	12"	**1-90** (394656-0-0)	**1-90** (394656-0-0)
		6"	**1-120** (394661-0-0)	**1-150**
40-1/2"	HP-X/Piranha	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" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex 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)	HP-X / 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
	HP-Xtra / RhinoBond PVC Plate	1-135 (346232-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HP-X / RhinoBond PVC Plate	1-120 (340668-0-0)	8	12	16
	HP-X / 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)	HP-X	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

Sure-Flex™ (PVC) Mechanically-Fastened Roofing System for SecurShield HD and InsulBase HD Recover
Factory Mutual (FM) Approvals

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

Membrane Type: .050'', .060'' or .080" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex KEE HP Reinforced Membrane (120'' only)

Membrane Width	Fastener/Plate (10)	Fastener Spacing	FM Ratings over Min. 22 Gauge Grade C Steel (33 ksi)	FM Ratings over Min. 22 Gauge Grade E Steel (80 ksi) (11) or Structural Concrete
120"	HP-X/Piranha	6"	-	**1-75**
	HP-Xtra/Piranha Xtra	12"	-	**1-60**
	HP-X/Oval Barbed	6"	-	**1-90**
81"	HP-X/Piranha	6"	-	**1-105** (303455-0-0)
		12"	**1-75** (380198-0-0)	**1-90** (303465-0-0)
	HP-Xtra/Piranha Xtra	12"	**1-75**	**1-90** (303462-0-0)
	HP-X/Piranha	18"	**1-60** (303466-0-0)	**1-60** (303466-0-0)
	HP-Xtra/Piranha Xtra	18"	**1-60** (303458-0-0)	**1-60** (303458-0-0)
60"	HP-X/Piranha	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"	HP-X/Piranha	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" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex 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)	HP-X / 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
	HP-Xtra / RhinoBond PVC Plate	1-135 (383685-0-0)	8	12	16
Min. 22 Gauge Grade E Steel (11) (80 ksi)	HP-X / RhinoBond PVC Plate	1-120 (341111-0-0)	8	12	16
	HP-X / 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" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex KEE HP Reinforced Membrane

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

Sure-Flex™ (PVC) Mechanically-Fastened Roofing System

FM 4474 Approvals

Membrane Type: .050’’, .060’’ or .080" Sure-Flex PVC Reinforced Membrane
.050", .060’’ or .080" Sure-Flex 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”	HP-X/Piranha	6”	1-75	1-75
	HP-Xtra/Piranha Xtra	12”	1-60	1-60
	HP-X/Oval Barbed	6”	1-90	1-90
81"	HP-X/Piranha	6”	1-105	1-105
		12”	1-75	1-90
	HP-Xtra/Piranha Xtra	12”	1-90	1-90
	HP-X/Piranha	18"	1-60	1-60
	HP-Xtra/Piranha Xtra	18"	1-60	1-60
40-1/2"	HP-X/Piranha	6”	1-165	1-165
		12"	1-120	1-120

Sure-Flex™ (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 Sure-Flex™ 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" Sure-Flex PVC Reinforced Membrane
.050", .060'' or .080" Sure-Flex KEE HP Reinforced Membrane (120'' only)

FM Approvals – Metal Retrofit

Purlin Spacing	Fastener/Plate	Spacing	Rating	Coverboard	Sure-Flex PVC and Sure Flex KEE HP
60 Inches	HP Purlin/ Piranha	6”	1-105	SecurShield HD / InsulBase HD	379904-0-0
				HP Recovery Board	
				InsulBase/SecurShield	
				DensDeck / SECUROCK / DEXcell	272712-0-0
		12"	1-90	SecurShield HD / InsulBase HD	281330-0-0
				HP Recovery Board	
				InsulBase/SecurShield	
				DensDeck / SECUROCK / DEXcell	272720-0-0
		18"	1-60	SecurShield HD / InsulBase HD	281332-0-0
				HP Recovery Board	
				InsulBase/SecurShield	
				DensDeck / SECUROCK / DEXcell	272723-0-0

FM Approvals – Induction Welding Metal Retrofit

Deck Type	Fastener	Plate	Row Spacing	Fastener Spacing in Rows	Rating	Coverboard	Sure-Flex PVC	Sure-Flex KEE HP
Structural Steel Purlin (Metal Retrofit)	HP Purlin	RhinoBond PVC Plate	5'	6"	1-180	SecurShield HD / InsulBase HD	408587-0-0	408587-0-0
						HP Recovery Board	373493-0-0	373495-0-0
						InsulBase/SecurShield	373491-0-0	373491-0-0
						DensDeck / SECUROCK / DEXcell	373492-0-0	373492-0-0
			5'	12"	1-105	SecurShield HD / InsulBase HD	408586-0-0	408586-0-0
						HP Recovery Board	373488-0-0	373489-0-0
						InsulBase/SecurShield	373490-0-0	373490-0-0
						DensDeck / SECUROCK / DEXcell	373487-0-0	373487-0-0
			5'	18"	1-75	SecurShield HD / InsulBase HD	408585-0-0	408585-0-0
						HP Recovery Board	373485-0-0	373486-0-0
						InsulBase/SecurShield	373482-0-0	373482-0-0
						DensDeck / SECUROCK / DEXcell	373484-0-0	373484-0-0
			10'	6"	1-120	SecurShield HD / InsulBase HD	408582-0-0	408582-0-0
						HP Recovery Board	373480-0-0	373481-0-0
						InsulBase/SecurShield	373482-0-0	373482-0-0
						DensDeck / SECUROCK / DEXcell	373479-0-0	373479-0-0
			10'	12"	1-60	SecurShield HD / InsulBase HD	408564-0-0	408564-0-0
						HP Recovery Board	373477-0-0	373478-0-0
						InsulBase/SecurShield	372618-0-0	372618-0-0
						DensDeck / SECUROCK / DEXcell	372616-0-0	372616-0-0

Sure-Flex™ 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 (Sure-Flex PVC Membrane only) or Cav-Grip PVC

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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	InsulBase, 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 InsulBase 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 1/4" DEXcell FA Glass Mat Roof Boards	Unlimited
8		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" HP Recovery Board	1-1/2"
9		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 7/16" APA Rated OSB or minimum 1-1/2" StormBase	3"
10		Any UL Classified Insulation, any thickness (OPTIONAL)	Min. 5/16" EcoStorm VSH	1-1/2"
11	Structural (poured-in-place) concrete	N/A	N/A	1-1/2"
12	Precast concrete with grouted joints	N/A	N/A	1-1/2"

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

Membrane Adhesive: Low VOC PVC Bonding Adhesive, HydroBond Adhesive (Sure-Flex PVC Membrane only) or Cav-Grip PVC

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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 Carlisle 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 Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	1-1/2"
3	Minimum 1/4" DEXcell Glass Mat or DEXcell FA Glass Mat Roof Boards (2)	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	1-1/2"
4	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 Carlisle Polyisocyanurate Insulation may be used below the minimum 1" thick top layer, any combination, any thickness. (3)	N/A	1/2"
5	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"
6	N/A	OPTIONAL layer or layers of any Carlisle 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"
7	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"
8	N/A	Minimum 1-1/2" layer of Insulfoam HD Composite over a minimum 3" layer of Insulfoam EPS. (2)	N/A	1/2"
9	N/A	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	Minimum 1/4" SECUROCK® Gypsum Fiber Roof Board (2)	3"
10	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 3/8" SECUROCK® Gypsum Fiber Roof Board (2)	2"
11	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SECUROCK® Gypsum Fiber Roof Board (2)	4"
12	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck Prime Roof Board (2)	Unlimited
13	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DEXcell FA Glass Mat Roof Board (2)	Unlimited
14	N/A	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, Min. 2" thickness.	Min. 7/16" EcoStorm VSH (2)	1"
15	Two layers of Carlisle FR Base Sheet	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	3/4"

Sure-Flex™ 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 (Sure-Flex PVC Membrane only) or Cav-Grip PVC

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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 Carlisle FR Base Sheet	Any UL Classified Carlisle 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 Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	2-1/2"

Sure-Flex™ (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 (Sure-Flex PVC Membrane only) or Cav-Grip PVC

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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 Carlisle Polyisocyanurate Insulation, any combination, any thickness. Optionally, any UL Classified insulation, any combination, any thickness may be used below the Carlisle Polyisocyanurate Insulation.	N/A	Unlimited
2	N/A	Any UL Classified Insulation, any combination, any thickness (OPTIONAL)	Min. 5/16" EcoStorm VSH (2)	1/2"
3	N/A	1/2" HP Recovery Board	N/A	1"

SecurShield HD Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex 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" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of FAST	1-90	-	462147-0-0 (LVOC)
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD over 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	354273-0-0	354278-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of FAST	1-90	353920-0-0 (HydroBond)	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD over 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	354279-0-0 (HydroBond)	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/2" SecurShield HD	12" ribbons or Rig Splatter of FAST	1-90	353921-0-0	353925-0-0 (LVOC)
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/2" SecurShield HD over 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	354280-0-0	354284-0-0
Min. 2" InsulBase Polyiso	16 (2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of FAST	1-120	454528-0-0	454529-0-0 (TRU GROUND)
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD	6" ribbons or Rig Splatter of FAST	1-135	454532-0-0 (TRU GROUND)	454533-0-0 (TRU GROUND)
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD over 1-1/2" InsulBase Polyiso	6" ribbons or Rig Splatter of FAST	1-135	538587-0-0	-
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD	4" ribbons or Rig Splatter of FAST	1-225	454541-0-0 (TRU GROUND)	454542-0-0 (TRU GROUND)
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD	4" ribbons or Rig Splatter of FAST	1-225	538590-0-0	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	1/2" SecurShield HD	4" ribbons or Rig Splatter of FAST	1-165	446204-0-0	446205-0-0 (LVOC)
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft)	SecurShield HD over InsulBase Polyiso	6" ribbons of FAST	1-90	-	450181-0-0
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III 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" InsulBase	12" ribbons or Rig Splatter of FAST	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" InsulBase	FAST - 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" InsulBase	FAST - Rig Splatter	1-225	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" Dens-Deck Prime or Securock	8 (4 sq. ft)	Min.1/2" SecurShield HD over Min. 1/2" InsulBase	12" ribbons of FAST	1-90	-	-
Min. 1/2" Dens-Deck Prime or Securock	20 (1.6 sq. ft)	Min.1/2" SecurShield HD over Min. 1/2" InsulBase	6" ribbons of FAST	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" InsulBase	12" ribbons of FAST	1-90	-	-
Min. 1/2" Dens-Deck Prime or Securock	20 (1.6 sq. ft)	Min.1/2" SecurShield HD over Min. 1/2" InsulBase	6" ribbons of FAST	1-135	-	-

SecurShield HD Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons or Rig Splatter of FAST	1-225	424763-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD	12" ribbons or Rig Splatter of FAST	1-90	424668-0-0 (Hydrobond)	-
Min. 3/4" Optim-R	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-120	438110-0-0 (LVOC)	-
Min. 3/4" Optim-R	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-120	438112-0-0 (HydroBond)	438113-0-0 (LVOC)
Min. 2" Insulfoam EPS	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-285	429737-0-0 (HydroBond)	-
Min. 2" Insulfoam EPS	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-285	429725-0-0 (LVOC & CGP)	429726-0-0 (LVOC)
Min. 1-1/2" Insulfoam HD Comp	Full-Coverage FAST	-	-	1-225	424573-0-0 (Hydrobond)	-
Min. 1/2" InsulBase 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 InsulBase Polyiso	6" ribbons or Rig Splatter of FAST	1-90	-	450180-0-0
Min. 1/2" InsulBase Polyiso	Loose laid	1/2" SecurShield HD	16 (2 sq. ft.)	1-90	434257-0-0 (LVOC)	434257-0-0 (LVOC)
Min. 2" ChannelDry EPS	Loose laid	Min. 2" Insulfoam HD Comp	6" ribbons of FAST	1-90	427788-0-0	427788-0-0
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 3/4" Optim-R	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-165 702	437593-0-0 (LVOC)	437597-0-0 (LVOC)
Min. 3/4" Optim-R	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-120 702	437596-0-0 (HydroBond)	-
Min. 1-1/2" InsulBase Polyiso or Min. 2" Insulfoam EPS	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-255	429729-0-0 (LVOC)	429730-0-0 (LVOC)
					429739-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-315	364647-0-0 (LVOC)	364657-0-0 (LVOC)
					424751-0-0 (HydroBond)	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-465	-	-
Concrete Deck /SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	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" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-240	-	-
Min. 1/2" InsulBase Polyiso or 1-1/2" Securshield	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-225	424798-0-0 (Hydrobond)	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons or Rig Splatter of FAST	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" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex 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 FAST	1-90	-	-
-	-	1/2" SecurShield HD	4" ribbons of FAST	1-150	-	-
Concrete Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-150	-	-
-	-	1/2" SecurShield HD	6" ribbons of FAST	1-150	-	-
Gypsum Deck						
-	-	1/2" SecurShield HD	6" ribbons of FAST	1-90	-	-

FM Approvals
Design "A" Adhered Roofing Systems

SecurShield HD Plus Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" InsulBase 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" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of FAST	1-90	345060-0-0 (LVOC) 353920-0-0 HydroBond)	345061-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD Plus over Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	354273-0-0 (LVOC) 354279-0-0 (HydroBond)	354278-0-0
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of FAST	1-90	353921-0-0	353925-0-0
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/2" SecurShield HD Plus over Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	538586-0-0	354284-0-0
Min. 2" InsulBase Polyiso	16 (2 sq. ft.)	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of FAST	1-120	-	-
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus	6" ribbons or Rig Splatter of FAST	1-135	454532-0-0	-
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over Min. 1-1/2" InsulBase Polyiso	6" ribbons or Rig Splatter of FAST	1-135	538587-0-0	-
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD Plus	4" ribbons or Rig Splatter of FAST	1-225	454541-0-0	-
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD Plus over Min. 1-1/2" InsulBase Polyiso	4" ribbons or Rig Splatter of FAST	1-225	538590-0-0	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	1/2" SecurShield HD Plus	4" ribbons or Rig Splatter of FAST	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 InsulBase Polyiso	6" ribbons of FAST	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" SecurShield HD Plus over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over InsulBase Polyiso	FAST - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	1/2" SecurShield HD Plus over InsulBase Polyiso	FAST - Rig Splatter	1-225	-	-
Steel Deck (Min. 22 Gauge)/ SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" SecurShield HD Plus over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over InsulBase Polyiso	6" ribbons of FAST	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 InsulBase Polyiso	6" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" SecurShield HD Plus over InsulBase Polyiso	6" ribbons of FAST	1-135	-	-

FM Approvals
Design "A" Adhered Roofing Systems

SecurShield HD Plus Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of FAST	1-225	387061-0-0 (LVOC)	387338-0-0
					424761-0-0 (HydroBond)	-
Min. 2"Insulfoam EPS	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-285	429725-0-0 (LVOC)	429726-0-0
Min. 2"Insulfoam EPS	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-285	429737-0-0 (HydroBond)	429726-0-0
Min. 1/2" InsulBase 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" InsulBase Polyiso	Hot Asphalt	1/2" SecurShield HD Plus	Hot Asphalt	1-240	-	-
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1/2" InsulBase Polyiso or Min. 2" Insulfoam	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-255	429729-0-0 (LVOC)	429730-0-0
					429739-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-315	364647-0-0 (LVOC)	364657-0-0 (LVOC)
					424751-0-0 (HydroBond)	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD Plus	6" ribbons of FAST	1-465	-	-
Concrete Deck/SureMB 70 SA with Cav-Grip III Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	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" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-225	393033-0-0 (LVOC)	393038-0-0
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-225	424798-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD Plus	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD Plus	6" ribbons of FAST	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1/2" SecurShield HD Plus	12" ribbons or Rig Splatter of FAST	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" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex 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 FAST	1-90	-	-
-	-	1/2" SecurShield HD Plus	4" ribbons of FAST	1-150	-	-
Concrete Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD Plus	6" ribbons of FAST	1-150	-	-
-	-	1/2" SecurShield HD Plus	6" ribbons of FAST	1-150	-	-
Gypsum Deck						
Min. 1-1/2" InsulBase Polyiso	Full-Coverage FAST	1/2" SecurShield HD Plus	Full-Coverage FAST	1-90	-	-

FM Approvals
Design “A” Adhered Roofing Systems

InsulBase Polyiso Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" InsulBase Polyiso	16 (2 sq. ft)	-	-	1-90	187383-0-0 (LVOC)	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	-	-	1-90	187575-0-0 (LVOC)	345901-0-0
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	-	-	1-90	345900-0-0 (HydroBond)	NA
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft)	-	-	1-135	325911-0-0 (LVOC)	325946-0-0
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 2" InsulBase Polyiso	20 (1.6 sq. ft)	1-135	424164-0-0	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	489975-0-0 (LVOC)	489976-0-0 (LVOC)
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	187137-0-0 (LVOC)	187137-0-0
Min. 2" InsulBase Polyiso	16 (2 sq. ft.)	Min. 1" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-105	454530-0-0	454531-0-0
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	Min. 1" InsulBase Polyiso	6" ribbons or Rig Splatter of FAST	1-150	455835-0-0	455836-0-0
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	Min. 1" InsulBase Polyiso	4" ribbons or Rig Splatter of FAST	1-270	455875-0-0	455877-0-0
Min. 1/2" Dens Deck or DensDeck Prime	16 (2 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	181116-0-0 (LVOC)	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR with Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	211245-0-0	400229-0-0
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	FAST - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	FAST - Rig Splatter	1-240	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA with Cav-Grip III Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	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" InsulBase Polyiso	12" ribbons of FAST	1-90	454499-0-0	454400-0-0
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1-135	-	-

FM Approvals
Design “A” Adhered Roofing Systems

InsulBase Polyiso Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1-1/2" InsulBase Polyiso	FAST Full-Coverage	-	-	1-450	424518-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	-	-	1-285	-	434245-0-0 (LVOC)
Min. 1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	-	-	1-315	424559-0-0 (HyrdoBond)	-
Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	-	-	1-315	269947-0-0 (LVOC)	-
Min. 1-1/2" InsulBase Polyiso	Hot Asphalt	-	-	1-315	269947-0-0 (LVOC)	-
				1-300	424551-0-0 (HydroBond)	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	1-90	424561-0-0 (HydroBond)	-
Min. 1-1/2" InsulBase Polyiso	16 (2 sq. ft.)	Min. 1-1/2" InsulBase Polyiso	Full-Coverage FAST	1-90	424523-0-0 (HydroBond)	-
Min. 1" InsulBase Polyiso	20 (1.6 sq. ft)	-	-	1-90	424552-0-0 (HydroBond)	-
Min. 1-1/2" InsulBase Polyiso	16 (2 sq. ft.)	-	-	1-90	424534-0-0 (HydroBond)	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	-	-	1-90	424562-0-0 (HydroBond)	-
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	-	-	1-255	434244-0-0 (LVOC)	434244-0-0
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	-	-	1-315	462916-0-0	462919-0-0
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	-	-	1-465	462918-0-0	462920-0-0
Concrete Deck/SureMB 70 SA with Cav-Grip III Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	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" InsulBase Polyiso	12" ribbons of FAST	Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-315	-	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	-	-	1-315	462947-0-0	462949-0-0
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	-	-	1-465	462948-0-0	462950-0-0
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	16 (2 sq. ft)	-	-	1-90	-	-
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	-	-	1-90	164217-0-0 (LVOC)	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	-	-	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
Min. 1-1/2" InsulBase Polyiso	16 (2 sq. ft)	-	-	1-90	-	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	-	-	1-90	-	-
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft)	-	-	1-150	-	-

FM Approvals
Design “A” Adhered Roofing Systems

InsulBase Polyiso Ratings - Recover

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
1" InsulBase Polyiso	20 (1.6 sq. ft)	-	-	1-90	164654-0-0 (LVOC)	-
1-1/2" InsulBase Polyiso	16 (2 sq. ft.)	-	-	1-90	475858-0-0	475859-0-0 (LVOC)
1" InsulBase Polyiso	6" ribbons of FAST	-	-	1-90	-	-
Concrete Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	-	-	1-90	303378-0-0 (LVOC)	-
Gypsum Deck						
1-1/2" InsulBase Polyiso	16 (2 sq. ft.)	-	-	1-90	371869-0-0 (LVOC)	371870-0-0
1-1/2" InsulBase Polyiso	16 (2 sq. ft.)	-	-	1-90	466940-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	-	-	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" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex 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" InsulBase Polyiso	10 (3.2 sq. ft.)	1-1/2" SecurShield or 2" SecurShield HD Comp.	12" ribbons or Rig Splatter of FAST	1-90	-	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 2" SecurShield HD Comp.	12" ribbons or Rig Splatter of FAST	1-90	461415-0-0	-
Min. 2" InsulBase Polyiso	16 (2 sq. ft.)	Min. 1/2" SecurShield Polyiso	12" ribbons or Rig Splatter of FAST	1-105	454530-0-0	454531-0-0
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	Min. 1" SecurShield Polyiso	6" ribbons or Rig Splatter of FAST	1-150	455835-0-0	455836-0-0
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	Min. 1" SecurShield Polyiso	4" ribbons of FAST	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 FAST	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	12" ribbons of FAST	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.	FAST - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	FAST - Rig Splatter	1-240	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" SecurShield or SecurShield HD Comp.	6" ribbons of FAST	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 FAST	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 FAST	1-135	-	-

FM Approvals
Design “A” Adhered Roofing Systems

SecurShield and SecurShield HD Composite Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	Min. 1-1/2" SecurShield	12" ribbons or Rig Splatter of FAST	1-225	424569-0-0 (HydroBond)	-
Min. 1-1/2" SecurShield	12" ribbons or Rig Splatter of FAST	-	-	1-225	424570-0-0 (HydroBond)	-
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 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 FAST	-	-	1-315	462916-0-0	462919-0-0
Min. 1-1/2" SecurShield	6" ribbons of FAST	-	-	1-465	462918-0-0	462920-0-0
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" SecurShield HD Comp.	12" ribbons of FAST	1-255	400838-0-0	400832-0-0
Concrete Deck/SureMB 70 SA with Cav-Grip III Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield or SecurShield HD Comp.	12" ribbons of FAST	1-285	-	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield or SecurShield HD Comp.	12" ribbons of FAST	1-330	-	-
Min. 1/2" SecurShield	6" ribbons of FAST	-	-	1-315	-	-
Min. 1-1/2" SecurShield	6" ribbons of FAST	-	-	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 FAST	-	-	1-90	164217-0-0	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" SecurShield or SecurShield HD Comp.	12" ribbons or Rig Splatter of FAST	-	-	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" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex 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 FAST	-	-	1-90	-	-
Gypsum Deck						
1" SecurShield	20 (1.6 sq. ft)	-	-	1-90	-	-
1" SecurShield	Full-Coverage FAST	-	-	1-90	-	-

FM Approvals
Design "A" Adhered Roofing Systems

Securock Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex 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" InsulBase 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" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	8 (4 sq. ft) SecurFAST Plate	1-90	319026-0-0	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	6 (5.33 sq. ft) SecurFAST Plate	1-75	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 5/8" Securock	6 (5.33 sq. ft) SecurFAST Plate	1-90	212009-0-0	-
Min. 1-1/2" InsulBase 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" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	32 (1 sq. ft)	1-285	424162-0-0 (HydroBond)	-
Min. 1-1/2" InsulBase 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" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1/4" Securock	12" ribbons or Rig Splatter of FAST	1-90	403963-0-0 (LVOC)	408074-0-0 (LVOC)
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" Securock	12" ribbons or Rig Splatter of FAST	1-90	187180-0-0 (LVOC)	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	Min. 1/4" Securock	6" ribbons or Rig Splatter of FAST	1-105	-	-
Min. 2" InsulBase Polyiso	16 (2 sq. ft.)	Min. 1/2" Securock	12" ribbons or Rig Splatter of FAST	1-120	455775-0-0	455775-0-0
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	Min. 1/2" Securock	6" ribbons or Rig Splatter of FAST	1-135	455742-0-0	455742-0-0
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	Min. 1/2" Securock	4" ribbons or Rig Splatter of FAST	1-225	455817-0-0	455817-0-0
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	Min. 1/4" Securock	4" ribbons or Rig Splatter of FAST	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 InsulBase Polyiso	12" ribbons of FAST	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" Securock over Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	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 FAST	1-90	502785-0-0	502785-0-0
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and Cav-Grip III						
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/2" Securock over Min. 1-1/2" InsulBase Polyiso	FAST - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	1/2" Securock over Min. 1-1/2" InsulBase Polyiso	FAST - 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" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/4" Securock over Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1-135	-	-

FM Approvals
Design “A” Adhered Roofing Systems

Securock Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons or Rig Splatter of FAST	1-120	424738-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons or Rig Splatter of FAST	1-285	429656-0-0 (LVOC)	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons or Rig Splatter of FAST	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" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	10 (3.2 sq. ft.)	1-90	424818-0-0	398874-0-0
Min. 1/2" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	20 (1.6 sq. ft)	1-150	424819-0-0	398909-0-0
Min. 1/2" InsulBase 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 III, 702-LV or 702 Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-315	424744-0-0 (Hydrobond)	-
					364510-0-0 (LVOC)	364511-0-0
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 1/4" Securock	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 1/4" Securock	6" ribbons of FAST	1-465	-	-
Concrete Deck/SureMB 70 SA with Cav-Grip III Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	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" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-330	424801-0-0 (HydroBond)	394638-0-0
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 1/4" Securock	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 1/4" Securock	6" ribbons of FAST	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	Min. 1/4" Securock	12" ribbons or Rig Splatter of FAST	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" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 2" InsulBase Polyiso	Hot Asphalt	Min. 1/4" Securock	Hot Asphalt	1-495	303398-0-0 (LVOC)	303398-0-0
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 1/4" Securock	6" ribbons of FAST	1-150	-	-

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Design “A” Adhered Roofing Systems

DensDeck Prime Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex 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" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	8 (4 sq.ft)	1-90	388252-0-0	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/4" DensDeck Prime	18 (1.8 sq. ft)	1-105	382311-0-0	-
Min. 1-1/2" InsulBase 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" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	20 (1.6 sq. ft)	1-150	383711-0-0	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-165	387932-0-0	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-180 (29)	384597-0-0	-
Min. 1-1/2" InsulBase 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" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of FAST	1-90	403961-0-0 (LVOC)	403961-0-0 (LVOC)
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of FAST	1-90	187145-0-0 (LVOC)	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of FAST	1-90	428869-0-0 (HyrdoBond)	-
Min. 2" InsulBase Polyiso	16 (2 sq. ft.)	Min. 1/2" DensDeck Prime	12" ribbons or Rig Splatter of FAST	1-120	455774-0-0	455774-0-0
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	Min. 1/2" DensDeck Prime	6" ribbons or Rig Splatter of FAST	1-135	455741-0-0	455741-0-0
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	Min. 1/2" DensDeck Prime	4" ribbons or Rig Splatter of FAST	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 InsulBase Polyiso	12" ribbons of FAST	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" DensDeck Prime over InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	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 FAST	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 InsulBase Polyiso	FAST - Rig Splatter	1-135	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	Min. 1/2" DensDeck Prime over InsulBase Polyiso	FAST - Rig Splatter	1-240	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" DensDeck Prime over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1/4" DensDeck Prime over InsulBase Polyiso	6" ribbons of FAST	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 InsulBase Polyiso	12" ribbons of FAST	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 InsulBase Polyiso	6" ribbons of FAST	1-135	-	-

FM Approvals
Design “A” Adhered Roofing Systems

DensDeck Prime Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of FAST	1-315	345857-0-0	-
Min. 1/2" InsulBase Polyiso	Hot Asphalt	Min. 1/4" DensDeck Prime	Hot Asphalt	1-300	-	-
Min. 1" InsulBase Polyiso	Loose laid	Min. 5/8" DensDeck Prime	8 (4 sq. ft)	1-90	424540-0-0	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	Full-Coverage FAST	1-90	424532-0-0	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of FAST	1-90	424531-0-0	-
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-255	424748-0-0	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-315	364642-0-0	364511-0-0
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 1/4" DensDeck Prime	6" ribbons of FAST	1-465	-	-
Concrete Deck/SureMB 70 SA and Cav-Grip III Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	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" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-330	424803-0-0 (Hydrobond)	394638-0-0
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-315	-	393037-0-0
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 1/4" DensDeck Prime	6" ribbons of FAST	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-90	164605-0-0	-
Gypsum Deck Tear-Off/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons or Rig Splatter of FAST	Min. 1/4" DensDeck Prime	12" ribbons or Rig Splatter of FAST	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" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
-	-	1/2" DensDeck Prime	6" ribbons of FAST	1-135	458985-0-0	458985-0-0
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DensDeck Prime	12" ribbons of FAST	1-90	-	-

FM Approvals
Design “A” Adhered Roofing Systems

StormBasae Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
FM Approved	Loose Laid	Min. 2" StormBase	17 (1.8 sq. ft)	1-135	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" StormBase	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" StormBase	6" ribbons of FAST	1-135	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" StormBase	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" StormBase	6" ribbons of FAST	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" StormBase	12" ribbons of FAST	1-90	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" StormBase	6" ribbons of FAST	1-135	-	-
Concrete Deck						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-360	342089-0-0 (LVOC)	-
					424575-0-0 (HydroBond)	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-315	-	-
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-255	-	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 2" StormBase	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 2" StormBase	6" ribbons of FAST	1-360	-	-
Concrete Deck/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-285	-	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-330	-	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 2" StormBase	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 2" StormBase	6" ribbons of FAST	1-360	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose Laid	Min. 2" StormBase	17 (1.8 sq. ft)	1-135	-	-

StormBase Rating - Recover

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	Min. 2" StormBase	6" ribbons of FAST	1-150	-	-

FM Approvals
Design “A” Adhered Roofing Systems

HP Recovery Board Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
FM Approved	Loose laid	Min. 1/2" HP 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" HP Recovery Board	16 (2 sq. ft)	1-90	-	-

FM Approvals

DEXcell FA Glass Mat Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" InsulBase Polyiso	Loose laid	1/4" DEXcell FA Glass Mat	12 (2.7 sq. ft.)	1-75	345921-0-0	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	1/4" DEXcell FA Glass Mat	16 (2 sq. ft.)	1-90	143329-0-0	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	1/2" DEXcell FA Glass Mat	10 (3.2 sq. ft)	1-90	345911-0-0 (Hydrobond)	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	1/2" DEXcell FA Glass Mat	10 (3.2 sq. ft)	1-90	350398-0-0 (LVOC)	379949-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-90	403961-0-0	403961-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/4" DEXcell FA Glass Mat over Min. 1" InsulBase	12" ribbons of FAST	1-90	408073-0-0	408066-0-0
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-90	187145-0-0	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/4" DEXcell FA Glass Mat over Min. 1" InsulBase	12" ribbons of FAST	1-90	269163-0-0	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	1/4" DEXcell FA Glass Mat over Min. 1" InsulBase	6" ribbons of FAST	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" DEXcell FA Glass Mat over InsulBase Polyiso	12" ribbons of FAST	1-90	386902-0-0 (Hydrobond)	400351-0-0
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" DEXcell FA Glass Mat over Insulfoam EPS	6" ribbons of FAST	1-90	502785-0-0	502785-0-0
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" DEXcell FA Glass Mat over InsulBase Polyiso	6" ribbons of FAST	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.)	1/4" DEXcell FA Glass Mat over InsulBase Polyiso	12" ribbons of FAST	1-90	458442-0-0	-

FM Approvals

DEXcell FA Glass Mat Ratings - New Construction

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Concrete Deck						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-315	345857-0-0	211711-0-0
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-255	364651-0-0 (Hydrobond)	NA
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-315	364642-0-0	364511-0-0
Concrete Deck/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-285	-	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-255	393035-0-0 (Hydrobond)	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-315	393030-0-0	393037-0-0
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DEXcell FA Glass Mat	12" ribbons of FAST	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose laid	1/4" DEXcell FA Glass Mat	12 (2.67 sq. ft)	1-75	-	-
FM Approved	Loose laid	1/4" DEXcell FA Glass Mat	16 (2 sq. ft)	1-90	-	-
-	-	1/4" DEXcell FA Glass Mat	12 (2.67 sq. ft)	1-75	-	-
-	-	1/4" DEXcell FA Glass Mat	16 (2 sq. ft)	1-90	-	-

FM Approvals

DEXcell FA Glass Mat Ratings - Recover

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
-	-	1/2" DEXcell FA Glass Mat	10 (3.2 sq. ft)	1-90	307304-0-0	-
-	-	1/2" DEXcell FA Glass Mat	6" ribbons of FAST	1-150	-	-
Concrete Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/4" DEXcell FA Glass Mat	6" ribbons of FAST	1-150	-	-
-	-	1/4" DEXcell FA Glass Mat	6" ribbons of FAST	1-150	-	-
Gypsum Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" DEXcell FA Glass Mat	6" ribbons of FAST	1-90	-	-

FM Approvals

EcoStorm VSH Ratings - New Construction (SH RATINGS ONLY)

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
Min. 1-1/2" InsulBase Polyiso	Loose laid	1/2" EcoStorm VSH	8 (4 sq. ft)	1-90	-	-
FM Approved	Loose laid	1/2" EcoStorm VSH	18 (1.8 sq. ft)	1-120	-	-
FM Approved	Loose laid	1/2" EcoStorm VSH	32 (1 sq. ft)	1-165	518805-0-0	-
FM Approved	Loose laid	1/2" EcoStorm VSH	24 (1.33 sq. ft)	1-225 (30)	-	-
FM Approved	Loose laid	1/2" EcoStorm VSH	32 (1 sq. ft)	1-270 (30)	518806-0-0	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" EcoStorm VSH	6" ribbons of FAST	1-90	-	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/2" EcoStorm VSH	6" ribbons of FAST	1-90	-	-
Min. 2" InsulBase Polyiso	16 (2 sq. ft.)	1/2" EcoStorm VSH	12" ribbons of FAST	1-120	-	-
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	1/2" EcoStorm VSH	6" ribbons of FAST	1-135	-	-
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	1/2" EcoStorm VSH	4" ribbons of FAST	1-225	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	1/2" EcoStorm VSH	4" ribbons of FAST	1-165	-	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	1/2" EcoStorm VSH over InsulBase Polyiso	6" ribbons of FAST	1-90	-	-
Steel Deck (Min. 22 Gauge)/VapAir Seal 725 TR and Cav-Grip III or 702 Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" EcoStorm VSH over InsulBase Polyiso	6" ribbons of FAST	1-90	-	-
Steel Deck (Min. 22 Gauge)/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/2" EcoStorm VSH over InsulBase Polyiso	6" ribbons of FAST	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" EcoStorm VSH over InsulBase Polyiso	6" ribbons of FAST	1-90	-	-

Concrete Deck						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" EcoStorm VSH	12" ribbons of FAST	1-225	-	-
					-	-
Min. 2"Insulfoam EPS	12" ribbons of FAST	1/2" EcoStorm VSH	12" ribbons of FAST	1-285	-	-
Min. 1/2" InsulBase Polyiso	Loose laid	1/2" EcoStorm VSH	16 (2 sq. ft.)	1-90		-
Concrete Deck/VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1/2" InsulBase Polyiso or Min. 2" Insulfoam	12" ribbons of FAST	1/2" EcoStorm VSH	12" ribbons of FAST	1-255	-	-
					-	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" EcoStorm VSH	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" EcoStorm VSH	6" ribbons of FAST	1-465	-	-
Concrete Deck/SureMB 70 SA and Cav-Grip III Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" EcoStorm VSH	12" ribbons of FAST	1-285	519875-0-0	-
Concrete Deck/SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer						
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" EcoStorm VSH	12" ribbons of FAST	1-225	-	-
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" EcoStorm VSH	6" ribbons of FAST	1-315	-	-
Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" EcoStorm VSH	6" ribbons of FAST	1-465	-	-
Gypsum Deck Tear-Off						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" EcoStorm VSH	12" ribbons of FAST	1-90	-	-
Gypsum Deck Tear-Off/VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer						
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" EcoStorm VSH	12" ribbons of FAST	1-90	-	-
Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)						
FM Approved	Loose laid	1/2" EcoStorm VSH	12 (2.67 sq. ft)	1-75	-	-
FM Approved	Loose laid	1/2" EcoStorm VSH	16 (2 sq. ft)	1-90	-	-
-	-	1/2" EcoStorm VSH	12 (2.67 sq. ft)	1-75	-	-
-	-	1/2" EcoStorm VSH	16 (2 sq. ft)	1-90	-	-

FM Approvals

EcoStorm VSH Ratings - Recover (SH RATINGS ONLY)

Membrane Type: .050", .060" or .080" Sure-Flex PVC Reinforced Membrane
.050", .060" or .080" Sure-Flex 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: FAST = Flexible FAST and Flexible FAST 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	Sure-Flex PVC	Sure-Flex KEE HP (LVOC Only)
					RoofNAV Number	
Steel Deck (Min. 22 Gauge)						
-	-	1/2" EcoStorm VSH	8 (4 sq. ft)	1-90	-	-
-	-	1/2" EcoStorm VSH	6" ribbons of FAST	1-150	-	-
Concrete Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" EcoStorm VSH	6" ribbons of FAST	1-150	-	-
-	-	1/2" EcoStorm VSH	6" ribbons of FAST	1-150	-	-
Gypsum Deck						
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" EcoStorm VSH	6" ribbons of FAST	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-14165	For use in Non-HVHZ and 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

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

(800)-4SYNTEC (800-479-6832)

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Sure-Flex™ (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), Carlisle HP-X Fasteners and Piranha Plates or HP-Xtra Fasteners and Piranha Xtra Plates are required as identified in this chart. On structural concrete decks, CD-10, HP Concrete Spikes or HD 14-10 Fasteners are used with Piranha 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 InsulBase and SecurShield

FM Approval - Field Sheet Securement & Induction Welding Securement Criteria for InsulBase & 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. Sure-Seal HP fastener/Sure-Seal Insulation plate.
26. InsulFAST fastener/Sure-Seal Insulation plate.
27. InsulFAST 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.