

FleeceBACK[®]

Roofing Systems

FleeceBACK EPDM, TPO and PVC Adhered Roofing Systems with HydroBond Bonding Adhesive

Code Approval Guide

January 2024

Table of Contents

FleeceBACK Adhered Roofing Systems:

UL Approvals:

Non-Combustible - ANSI UL - Class A.....	2
Combustible - ANSI UL - Class A.....	3-4
Combustible & Non-Combustible ANSI UL- Class C.....	5

FM Approvals:

SecurShield HD New Construction.....	6-7
SecurShield HD Recover.....	8
SecurShield HD Plus New Construction.....	9-10
SecurShield HD Plus Recover.....	11
InsulBase Polyiso New Construction.....	12-13
InsulBase Polyiso Recover.....	14
SecurShield New Construction.....	15-16
SecurShield Recover.....	17
SecurShield HD Composite New Construction.....	18-19
Securock New Construction.....	20-21
Securock Recover.....	22
DensDeck Prime New Construction.....	23-24
DensDeck Prime Recover.....	25
StormBase New Construction.....	26
StormBase Recover.....	27

Reference Notes.....	28
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**UL Approval - Non-Combustible - ANSI/UL 790 Spread of Flame Test (Class A)
FleeceBACK Adhered with HydroBond Bonding Adhesive**

Membrane Type:
 Sure-Seal EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-White EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-Weld TPO FleeceBACK - 100, 115 or 135 Membrane
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 Membrane
 Sure-Flex KEE HP FleeceBACK - 105, 115 or 135 Membrane

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

System ID	Deck Type	Insulation	Cover Board	Maximum Slope				
				Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex KEE HP
1	Non-Combustible	InsulBase or SecurShield- any combination, any thickness	N/A	1/2" - InsulBase ONLY	3/4" Class C	1/2"	2-1/2"	1-1/2"
2		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SecurShield HD, SecurShield HD Plus or SecurShield HD Composite	-	3/4" Class C	1/2"	2-1/2"	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	1/2" - InsulBase ONLY	3/4" Class C	1/2"	1"	1"
4		Insulfoam HD Composite or Insulfoam HD Composite over Insulfoam EPS, any thickness and density.	N/A	-	1/2" Class C	1/2"	2"	1-1/2"
5		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" SECUROCK® Gypsum-Fiber Roof Boards	1"	1"	2"	3"	Unlimited
6		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck Prime Roof Boards	1"	1"	2"	3"	Unlimited
7		Any UL Classified Insulation, any thickness (OPTIONAL)	1/2" HP Recovery Board	1"	1"	1"	2-1/2"	2-1/2"
8		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 5/16" EcoStorm VSH	1/2"	3/4" Class C	1/2"	2-1/2"	1-1/2"
9		Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 7/16" APA Rated OSB or minimum 1-1/2" StormBase	1"	1"	1"	2-1/2"	2-1/2"
10		N/A	N/A	N/A	1"	1"	1"	2-1/2"

**UL Approval - Combustible (1) - ANSI/UL 790 Spread of Flame Test (Class A)
FleeceBACK Adhered with HydroBond Bonding Adhesive**

Membrane Type:
 Sure-Seal EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-White EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-Weld TPO FleeceBACK - 100, 115 or 135 Membrane
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 Membrane
 Sure-Flex KEE HP FleeceBACK - 105, 115 or 135 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	Insulation	Cover Board	Maximum Slope				
				Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex KEE HP
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	1/2" - InsulBase ONLY	3/4" Class C	1/2"	2-1/2"	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	1/2" - InsulBase ONLY	3/4" Class C	1/2"	2-1/2"	1-1/2"
3	N/A	Minimum 1" thick layer of SecurShield or SecurShield HD Composite is placed directly over a combustible roof deck. An optional layer or layers of any Carlisle Polyisocyanurate Insulation may be used below the minimum 1" thick top layer, any combination, any thickness. (3)	N/A	-	3/4" Class C	1/2"	1/2"	1/2"
4	3-4	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	-	3/4" Class C	1/2"	1/2"	1/2"
5	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)	-	3/4" Class C	1/2"	1/2"	1/2"
6	N/A	Minimum 4" thick layer of any UL Classified EPS insulation is placed directly over a combustible roof deck. (3)	1/2" thick SecurShield HD or SecurShield HD Plus. (3)	-	3/4" Class C	1/2"	1/2"	1/2"
7	N/A	Minimum 1-1/2" layer of Insulfoam HD Composite over a minimum 3" layer of Insulfoam EPS. (2)	N/A	-	1/2" Class C	1/2"	1/2"	1/2"
8	N/A	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	Minimum 1/4" SECUROCK® Gypsum Fiber Roof Board (2)	1"	1"	2"	3"	3"
9	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 3/8" SECUROCK® Gypsum Fiber Roof Board (2)	1"	1"	2"	2"	2"

**UL Approval - Combustible (1) - ANSI/UL 790 Spread of Flame Test (Class A)
FleeceBACK Adhered with HydroBond Bonding Adhesive**

Membrane Type:
 Sure-Seal EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-White EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-Weld TPO FleeceBACK - 100, 115 or 135 Membrane
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 Membrane
 Sure-Flex KEE HP FleeceBACK - 105, 115 or 135 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	Insulation	Cover Board	Maximum Slope				
				Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex KEE HP
Combustible (1) - ANSI/UL 790 Spread of Flame Test-Class A								
10	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/2" SECUROCK® Gypsum Fiber Roof Board (2)	1"	1"	2"	3"	4"
11	N/A	Any UL Classified Insulation, any thickness (OPTIONAL)	Minimum 1/4" DensDeck Prime Roof Board (2)	1"	1"	2"	3"	Unlimited
12	Three layers of Carlisle FR Base Sheet	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	1/2" - InsulBase ONLY	3/4" Class C	1/2"	2"	1-1/2"
13	Two layers of Carlisle FR Base Sheet	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	1/2" - InsulBase ONLY	3/4" Class C	1/2"	3/4"	3/4"
14	N/A	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, minimum 2" thickness. (2)	Minimum 7/16" EcoStorm VSH	1/2"	3/4" Class C	1/2" Class C	1"	1"

**UL Approval - Non-Combustible and Combustible ANSI/UL 790 Spread of Flame Test (Class C)
FleeceBACK Adhered with HydroBond Bonding Adhesive**

Membrane Type:
 Sure-Seal EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-White EPDM FleeceBACK - 100, 115 or 145 Membrane
 Sure-Weld TPO FleeceBACK - 100, 115 or 135 Membrane
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 Membrane
 Sure-Flex KEE HP FleeceBACK - 105, 115 or 135 Membrane

System ID	Thermal Barrier	Insulation	Cover Board	Maximum Slope				
				Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex KEE HP
Non-Combustible or Combustible - ANSI/UL 790 Spread of Flame Test-Class C								
1	N/A	Any UL Classified Carlisle Polyisocyanurate Insulation, any combination, any thickness.	N/A	Unlimited - InsulBase ONLY	3/4"	Unlimited	Unlimited	Unlimited
2	N/A	Any UL Classified Insulation, any combination, any thickness. (OPTIONAL)	Minimum 5/16" EcoStorm VSH	1/2"	1/2"	1/2"	1/2"	1/2"

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Steel Deck (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	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD	6" ribbons of FAST	1-90	-	375831-0-0	353920-0-0	375797-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD over 1-1/2" InsulBase	6" ribbons of FAST	1-90	-	375834-0-0	354279-0-0	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	1/2" SecurShield HD	8 (4 sq. ft) SecurFAST Plate	1-90	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	1/2" SecurShield HD	6" ribbons of FAST	1-105	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	1/2" SecurShield HD	4" ribbons of FAST	1-120	-	-	-	-
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	1/2" SecurShield HD	6" ribbons of FAST	1-135	-	-	493493-0-0	493498-0-0
Min. 2" InsulBase Polyiso	32 (1 sq. ft.)	1/2" SecurShield HD	4" ribbons of FAST	1-225	-	-	493494-0-0	493501-0-0
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	1/2" SecurShield HD over InsulBase Polyiso	6" ribbons of FAST	1-90	-	-	-	-
Steel Deck (Min. 22 Gauge) with 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 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 over InsulBase Polyiso	FAST - Rig Splatter	1-135	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft)	1/2" SecurShield HD over InsulBase Polyiso	FAST - Rig Splatter	1-225	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 70 SA and Cav-Grip III Primer								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft)	1/2" SecurShield HD 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 over InsulBase Polyiso	6" ribbons of FAST	1-135	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 90TG and 120TG Base Torch Applied								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft)	1/2" SecurShield HD 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 over InsulBase Polyiso	6" ribbons of FAST	1-135	-	-	-	-
Concrete Deck								
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-315	-	429666-0-0	-	429672-0-0
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-120	-	-	438112-0-0	-
Min. 1/2" InsulBase Polyiso	Hot Asphalt	1/2" SecurShield HD	Hot Asphalt	1-120	-	-	-	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-120	-	-	-	-

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III / 702-LV / 702 Primer								
3/4" Optim-R	6" ribbons of FAST	1/2" SecurShield HD	6" ribbons of FAST	1-120 702	-	-	437596-0-0	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-120	-	-	-	-
Concrete Deck with 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	1-120	Pending	Pending	Pending	Pending
Concrete Deck with 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	1-120	-	393062-0-0	392970-0-0	393060-0-0
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 with VapAir Seal 725TR and Cav-Grip III / 702-LV / 702 Primer								
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-90	-	-	-	-
(Celcore) 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
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD - Recover

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					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	-	-	-	-
-	-	1/2" SecurShield HD	6" ribbons of FAST	1-90	-	-	-	-
-	-	1/2" SecurShield HD	8 (4 sq. ft) SecurFAST Plate	1-120	-	-	-	-
Concrete Deck								
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD	12" ribbons of FAST	1-90	-	-	-	-
-	-	1/2" SecurShield HD	6" ribbons of FAST	1-120	-	-	-	-
Gypsum Deck								
-	-	1/2" SecurShield HD	6" ribbons of FAST	1-90	-	-	-	-

Note: 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. Direct membrane application over existing EPDM single-ply only.

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD Plus - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Steel Deck (Min. 22 Gauge)								
FM Approved	-	1/2" SecurShield HD Plus	8 (4 sq. ft.)	1-90	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	1/2" SecurShield HD Plus	18 (1.8 sq. ft.)	1-120	-	375838-0-0	369888-0-0	375810-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1/2" SecurShield HD Plus	6" ribbons of FAST	1-90	-	375831-0-0	353920-0-0	375797-0-0
Min. 2" InsulBase Polyiso	8 (4 sq. ft.)	1/2" SecurShield HD Plus	6" ribbons of FAST	1-90	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	1/2" SecurShield HD Plus	6" ribbons of FAST	1-105	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	1/2" SecurShield HD Plus	4" ribbons of FAST	1-120	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	6" ribbons of FAST	1-90	-	-	-	-
Steel Deck (Min. 22 Gauge) with VapAir Seal 725 TR and Cav-Grip III or 702 Primer								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	FAST - Rig Splatter	1-135	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	32 (1 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	FAST - Rig Splatter	1-225	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 70 SA and Cav-Grip III Primer								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	6" ribbons of FAST	1-135	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 90TG and 120TG Base Torch Applied								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	SecurShield HD Plus over InsulBase Polyiso	6" ribbons of FAST	1-90	Pending	Pending	Pending	Pending
Concrete Deck								
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-120	-	-	429666-0-0	429671-0-0
InsulBase	Hot Asphalt	1/2" SecurShield HD Plus	Hot Asphalt	1-120	-	-	-	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-120	-	-	-	-
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III / 702-LV / 702 Primer								

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD Plus - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-120	-	-	-	-
Concrete Deck with SureMB 70 SA and Cav-Grip III Primer								
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-120	-	-	-	-
Concrete Deck with SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer								
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-120	-	-	-	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-120	-	393062-0-0	392970-0-0	393060-0-0
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 with VapAir Seal 725TR and Cav-Grip III / 702-LV / 702 Primer								
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1/2" SecurShield HD Plus	12" ribbons of FAST	1-90	-	-	-	-
(Celcore) 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
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD Plus - Recover

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Steel Deck (Min. 22 Gauge)								
-	-	1/2" SecurShield HD Plus	8 (4 sq. ft)	1-90	-	-	-	-
-	-	1/2" SecurShield HD Plus	6" ribbons of FAST	1-90	-	-	-	-
-	-	1/2" SecurShield HD Plus	6" ribbons of FAST	1-90	-	-	-	-
-	-	1/2" SecurShield HD Plus	8 (4 sq. ft) SecurFAST Plate	1-120	-	-	-	-
Concrete Deck								
Min. 1/2" InsulBase Polyiso	6" ribbons of FAST	1/2" SecurShield HD Plus	6" ribbons of FAST	1-120	-	-	-	-
-	-	1/2" SecurShield HD Plus	6" ribbons of FAST	1-120	-	-	-	-
Gypsum Deck								
Min. 1-1/2" InsulBase Polyiso	Full-Coverage FAST	1/2" SecurShield HD Plus	Full-Coverage FAST	1-90	-	-	-	-

Note: 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. Direct membrane application over existing EPDM single-ply only.

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

InsulBase Polyiso - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Steel Deck (Min. 22 Gauge)									
Min. 1-1/2" InsulBase Polyiso	16 (2 sq. ft.)	-	-	1-90	375851-0-0	-	375850-0-0	375852-0-0	375849-0-0
Min. 2" InsulBase Polyiso	8 (4 sq. ft.)	-	-	1-90	375684-0-0	-	375708-0-0	345900-0-0	375669-0-0
Min. 2" InsulBase Polyiso	20 (1.6 sq. ft.)	-	-	1-120	-	-	375712-0-0	345905-0-0	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft.)	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	459641-0-0	-	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	1-1/2" InsulBase Polyiso	6" ribbons of FAST	1-105	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	1-1/2" InsulBase Polyiso	4" ribbons of FAST	1-120	-	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with VapAir Seal 725 TR and Cav-Grip III or 702 Primer									
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1-1/2" InsulBase Polyiso	FAST - Rig Splatter	1-120	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 70 SA and Cav-Grip III Primer									
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1-1/2" InsulBase Polyiso	6" ribbons of FAST	1-120	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 90TG or 120TG Base Torch Applied									
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1-1/2" InsulBase Polyiso	6" ribbons of FAST	1-120	-	-	-	-	-
Concrete Deck									
Min. 1" InsulBase Polyiso	12" ribbons of FAST	-	-	1-120	-	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

InsulBase Polyiso - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Min. 1/2" InsulBase Polyiso	Hot Asphalt	-	-	1-120	-	-	-	-	-

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

InsulBase Polyiso - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III / 702-LV / 702 Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	-	-	1-120	-	-	-	-	-
Concrete Deck with SureMB 70 SA and Cav-Grip III Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-120	-	-	-	-	-
Concrete Deck with SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-120	-	-	-	-	-
Gypsum Deck Tear-Off									
Min. 1-1/2" InsulBase Polyiso	16 (2 sq. ft)	-	-	1-90	-	-	-	466949-0-0	-
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	-	-	1-90	-	-	-	466950-0-0	-
Gypsum Deck Tear-Off with VapAir Seal 725TR and Cav-Grip III / 702-LV / 702 Primer									
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	-	-	1-90	-	-	-	-	-
(Celcore) 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)	-	-	1-120	-	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

InsulBase Polyiso - Recover

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Steel Deck (Min. 22 Gauge)									
1" InsulBase Polyiso	20 (1.6 sq ft)	-	-	1-90	-	-	391946-0-0	-	-
1" InsulBase Polyiso	6" ribbons of FAST	-	-	1-90	-	-	-	-	-
Concrete Deck									
1" InsulBase Polyiso	12" ribbons of FAST	-	-	1-120	-	-	-	-	-
Gypsum Deck									
1" InsulBase Polyiso	20 (1.6 sq. ft)	-	-	1-90	-	-	-	-	-
1" InsulBase Polyiso	12" ribbons of FAST	-	-	1-90	-	-	-	-	-

Note: 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. Direct membrane application over existing EPDM single-ply only.

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield Ratings - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Steel Deck (Min. 22 Gauge)								
Min. 2" SecurShield	16 (2 sq. ft.)	-	-	1-90	-	-	-	-
Min. 2" SecurShield	8 (4 sq. ft.)	-	-	1-90	-	375773-0-0	345915-0-0	375750-0-0
Min. 2" SecurShield	20 (1.6 sq. ft.)	-	-	1-120	-	375777-0-0	345925-0-0	375754-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-90	-	-	-	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-90	-	459651-0-0	-	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	Min. 1" SecurShield	6" ribbons of FAST	1-105	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	Min. 1" SecurShield	4" ribbons of FAST	1-120	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	Min. 1" SecurShield	6" ribbons of FAST	1-90	-	-	-	-
Steel Deck (Min. 22 Gauge) with VapAir Seal 725 TR and Cav-Grip III or 702 Primer								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-120	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 70 SA and Cav-Grip III Primer								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-120	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 90TG or 120TG Base Torch Applied								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 1" SecurShield	12" ribbons of FAST	1-120	-	-	-	-
Concrete Deck								
Min. 1-1/2" SecurShield	12" ribbons of FAST	-	-	1-120	-	-	-	-
Min 1-1/2" SecurShield	Hot Asphalt	-	-	1-120	-	-	-	-
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III / 702-LV / 702 Primer								
Min. 1/2" SecurShield	12" ribbons of FAST	-	-	1-120	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield Ratings - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Concrete Deck with SureMB 70 SA and Cav-Grip III Primer								
Min. 1/2" SecurShield	12" ribbons of FAST	-	-	1-120	Pending	Pending	Pending	Pending
Concrete Deck with SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer								
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/2" SecurShield	12" ribbons of FAST	1-120	-	-	-	-
Gypsum Deck Tear-Off								
Min. 1-1/2" SecurShield	16 (2 sq. ft)	-	-	1-90	-	-	-	-
Min. 1-1/2" SecurShield	12" ribbons of FAST	-	-	1-90	-	-	-	-
Gypsum Deck Tear-Off with VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer								
Min. 1-1/2" SecurShield	12" ribbons of FAST	-	-	1-90	-	-	-	-
(Celcore) Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)								
Min. 1-1/2" SecurShield	16 (2 sq. ft)	-	-	1-75	-	-	-	-
Min. 2" SecurShield	8 (4 sq. ft)	-	-	1-90	-	-	-	-
2" SecurShield	20 (1.6 sq. ft.)	-	-	1-120	-	-	-	-
2" SecurShield	32 (1 sq. ft.)	-	-	1-120	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield - Recover

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Steel Deck (Min. 22 Gauge)								
1" SecurShield	20 (1.6 sq. ft)	-	-	1-90	400217-0-0	-	-	-
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	-	-	-	-

Note: 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. Direct membrane application over existing EPDM single-ply only.

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD Composite Ratings - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Steel Deck (Min. 22 Gauge)								
Min. 1-1/2" SecurShield HD Composite	16 (2 sq. ft.)	-	-	1-90	-	-	-	-
Min. 2" SecurShield HD Composite	8 (4 sq. ft.)	-	-	1-90	-	-	-	-
Min. 2" SecurShield HD Composite	20 (1.6 sq. ft.)	-	-	1-120	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 2" SecurShield HD Composite	12" ribbons of FAST	1-90	-	-	-	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft.)	Min. 2" SecurShield HD Composite	12" ribbons of FAST	1-90	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	Min. 2" SecurShield HD Composite	6" ribbons of FAST	1-105	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	Min. 2" SecurShield HD Composite	4" ribbons of FAST	1-120	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	Min. 2" SecurShield HD Composite	6" ribbons of FAST	1-90	-	-	-	-
Steel Deck (Min. 22 Gauge) with 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 HD Composite	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" SecurShield HD Composite	6" ribbons of FAST	1-120	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 70 SA and Cav-Grip III Primer								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" SecurShield HD Composite	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" SecurShield HD Composite	6" ribbons of FAST	1-120	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 90TG or 120TG Base Torch Applied								
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	Min. 2" SecurShield HD Composite	12" ribbons of FAST	1-90	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" SecurShield HD Composite	6" ribbons of FAST	1-120	-	-	-	-
Concrete Deck								
Min 1-1/2" SecurShield HD Composite	12" ribbons of FAST	-	-	1-120	-	-	-	-
Min 1-1/2" SecurShield HD Composite	Hot Asphalt	-	-	1-120	-	-	-	-

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

SecurShield HD Composite Ratings - New Construction

Membrane Type: Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number			
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III / 702-LV / 702 Primer								
Min. 1/2" SecurShield HD Composite	12" ribbons of FAST	-	-	1-120	-	-	-	-
Concrete Deck with SureMB 70 SA and Cav-Grip III Primer								
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" SecurShield HD Composite	-	1-120	-	-	-	-
Concrete Deck with SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer								
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" SecurShield HD Composite	-	1-120	-	-	-	-
Gypsum Deck Tear-Off								
Min. 1-1/2" SecurShield HD Composite	16 (2 sq. ft)	-	-	1-90	-	-	-	-
Min. 1-1/2" SecurShield HD Composite	12" ribbons of FAST	-	-	1-90	-	-	-	-
Gypsum Deck Tear-Off with VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer								
Min. 1-1/2" SecurShield HD Composite	12" ribbons of FAST	-	-	1-90	-	-	-	-
(Celcore) Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)								
Min. 1-1/2" SecurShield HD Composite	16 (2 sq. ft)	-	-	1-75	-	-	-	-
Min. 2" SecurShield HD Composite	8 (4 sq. ft)	-	-	1-90	-	-	-	-
Min. 2" SecurShield HD Composite	20 (1.6 sq. ft.)	-	-	1-120	-	-	-	-
Min. 2" SecurShield HD Composite	32 (1 sq. ft.)	-	-	1-120	-	-	-	-

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

Securock - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Steel Deck (Min. 22 Gauge)									
FM Approved	Loose laid	Min. 1/4" Securock	12 (2.66 sq. ft)	1-75	375658-0-0	-	375664-0-0	-	375652-0-0
FM Approved	Loose laid	Min. 1/2" Securock	10 (3.2 sq. ft)	1-90	375656-0-0	-	375662-0-0	345911-0-0	375618-0-0
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	32 (1 sq. ft)	1-270	396179-0-0	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 5/8" Securock	8 (4 sq. ft) SecurFAST Plate	1-90	-	-	-	-	-
FM Approved	Loose laid	Min. 5/8" Securock	8 (4 sq. ft)	1-90	375657-0-0	-	375663-0-0	375913-0-0	375651-0-0
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	8 (4 sq. ft) SecurFAST Plate	1-90	443319-0-0	-	443320-0-0	-	443327-0-0
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" Securock	6 (5.33 sq. ft) SecurFAST Plate	1-90	443343-0-0	-	443344-0-0	-	443345-0-0
FM Approved	Loose laid	Min. 1/2" Securock	20 (1.6 sq. ft)	1-120	375659-0-0	-	375665-0-0	345923-0-0	375653-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1/4" Securock	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	544123-0-0	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" Securock	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	544125-0-0	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	Min. 1/4" Securock	6" ribbons of FAST	1-105	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	Min. 1/4" Securock	4" ribbons of FAST	1-120	-	-	-	-	-
Min. 1/2" DensDeck Prime or 5/8" Securock	16 (2 sq. ft.)	Min. 1/4" Securock over 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with VapAir Seal 725 TR and Cav-Grip III or 702 Primer									
Min. 1/2" Dens Deck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 1/2" Dens Deck Prime or Securock	20 (1.6 sq. ft.)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	FAST - Rig Splatter	1-120	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 70 SA and Cav-Grip III Primer									
Min. 1/2" Dens Deck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

Securock - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Min. 1/2" Dens Deck Prime or Securock	20 (1.6 sq. ft.)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1-120	-	-	-	-	-

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

Securock - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Steel Deck (Min. 22 Gauge) with SureMB 90TG or 120TG Base Torch Applied									
Min. 1/2" Dens Deck Prime or Securock	8 (4 sq. ft.)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Min. 1/2" Dens Deck Prime or Securock	20 (1.6 sq. ft.)	Min. 1/4" Securock over Min. 1-1/2" InsulBase Polyiso	6" ribbons of FAST	1-120	-	-	-	-	-
Concrete Deck									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-120	-	-	-	-	-
Min. 1/2" InsulBase Polyiso	Hot Asphalt	Min. 1/4" Securock	Hot Asphalt	1-120	-	-	-	-	-
Min. 1/2" InsulBase Polyiso	Loose laid	Min. 1/4" Securock	10 (3.2 sq. ft)	1-90	-	-	-	395790-0-0	-
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III, 702-LV or 702 Primer									
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-120	375660-0-0	-	508199-0-0 (1-165)	-	-
Concrete Deck with SureMB 70 SA and Cav-Grip III Primer									
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-120	-	-	-	-	-
Concrete Deck with SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer									
Min. 1-1/2" InsulBase Polyiso	Full-Coverage FAST	Min. 1/4" Securock	12" ribbons of FAST	1-120	-	-	-	-	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-120	-	-	394571-0-0	394566-0-0	393056-0-0
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 with VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer									
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-90	-	-	-	-	-
(Celcore) Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)									
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	32 (1 sq. ft)	1-120	-	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive
Securock - Recover

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Concrete Deck									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" Securock	12" ribbons of FAST	1-90	-	-	-	-	-

Note: 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. Direct membrane application over existing EPDM single-ply only.

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

DensDeck Prime - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					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	345893-0-0
FM Approved	Loose laid	Min. 1/2" DensDeck Prime	10 (3.2 sq. ft)	1-90	-	-	-	345920-0-0	345920-0-0
FM Approved	Loose laid	Min. 5/8" DensDeck Prime	8 (4 sq. ft)	1-90	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	8 (4 sq. ft)	1-90	-	-	-	507590-0-0	507590-0-0
Min. 1" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	20 (1.6 sq. ft)	1-105	-	-	-	345904-0-0	345904-0-0
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	18 (1.8 sq. ft)	1-135	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	20 (1.6 sq. ft)	1-150	-	-	487873-0-0	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-165	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-180 (16)	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	Loose laid	Min. 1/2" DensDeck Prime	32 (1 sq. ft)	1-255 (17)	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-90	-	-	420540-0-0	384623-0-0	384623-0-0
Min. 1-1/2" InsulBase Polyiso	10 (3.2 sq. ft.)	Min. 1/4" DensDeck Prime over Min. 1-1/2" InsulBase	12" ribbons of FAST	1-90	-	-	420529-0-0	454213-0-0	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-90	-	-	420541-0-0	428869-0-0	-
Min. 2" InsulBase Polyiso	8 (4 sq. ft)	Min. 1/4" DensDeck Prime over Min. 1-1/2" InsulBase	12" ribbons of FAST	1-90	-	-	402195-0-0	454214-0-0	-
Min. 1-1/2" InsulBase Polyiso	18 (1.8 sq. ft.)	Min. 1/4" DensDeck Prime	6" ribbons of FAST	1-105	-	-	-	-	-
Min. 1-1/2" InsulBase Polyiso	24 (1.33 sq. ft.)	Min. 1/4" DensDeck Prime	4" ribbons of FAST	1-165	-	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	16 (2 sq. ft.)	1/4" DensDeck Prime over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with VapAir Seal 725 TR and Cav-Grip III or 702 Primer									
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	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.)	1/4" DensDeck Prime over InsulBase Polyiso	FAST - Rig Splatter	1-120	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 70 SA and Cav-Grip III Primer									
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" DensDeck Prime over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

DensDeck Prime - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	1/4" DensDeck Prime over InsulBase Polyiso	6" ribbons of FAST	1-120	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 90TG or 120TG Base Torch Applied									
Min. 1/2" DensDeck Prime or Securock	8 (4 sq. ft.)	1/4" DensDeck Prime over InsulBase Polyiso	12" ribbons of FAST	1-90	-	-	-	-	-

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

DensDeck Prime - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Concrete Deck									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-315	-	-	429664-0-0	429668-0-0	429668-0-0
Min. 1/2" InsulBase Polyiso	Hot Asphalt	Min. 1/4" DensDeck Prime	Hot Asphalt	1-255	-	-	-	-	-
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III / 702-LV / 702 Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-255 Cav-Grip III	-	-	508199-0-0 (1-165)	364651-0-0	364651-0-0
				1-195 702-LV	-	-	-	364653-0-0	364653-0-0
				1-90 702	-	-	-	-	-
Concrete Deck with SureMB 70 SA and Cav-Grip III Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-255	-	-	-	-	-
Concrete Deck with SureMB 90TG and 120TG Base Torch Applied/Cut-Back Asphalt Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-255	-	-	-	394555-0-0	394555-0-0
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-255	-	-	-	-	-
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	-	-	-	-	-
Gypsum Deck Tear-Off with VapAir Seal 725TR and Cav-Grip III, 702-LV or 702 Primer									
Min. 1-1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 1/4" DensDeck Prime	12" ribbons of FAST	1-90	-	-	-	-	-
(Celcore) 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
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

DensDeck Prime - Recover

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Concrete Deck									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	1/4" DensDeck Prime	12" ribbons of FAST	1-90	-	-	-	-	-

Note: 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. Direct membrane application over existing EPDM single-ply only.

FM Approvals
FleeceBACK™ Adhered Roofing Systems
Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

StormBase - New Construction

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Steel Deck (Min. 22 Gauge)									
FM Approved	Loose laid	Min. 2" StormBase	17 (1.8 sq. ft)	1-105	-	-	-	-	-
Min. 1" InsulBase Polyiso	Loose laid	Min. 2" StormBase	17 (1.8 sq. ft)	1-105	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with 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	8 (4 sq. ft) SecurFAST Plate	1-90	-	-	-	-	-
Min. 1/2" DensDeck Prime or Securock	20 (1.6 sq. ft.)	Min. 2" StormBase	FAST - Rig Splatter	1-105	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with 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	1-105	-	-	-	-	-
Steel Deck (Min. 22 Gauge) with SureMB 90TG or 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	1-105	-	-	-	-	-
Concrete Deck									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-105	-	-	-	-	-
Min. 1/2" InsulBase Polyiso	Hot Asphalt	Min. 2" StormBase	Hot Asphalt	1-105	-	-	-	-	-
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-105	-	-	-	-	-
Concrete Deck with VapAir Seal 725 TR and Cav-Grip III / 702-LV / 702 Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-105	-	-	-	-	-
Concrete Deck with SureMB 70 SA and Cav-Grip III Primer									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-105	-	-	-	-	-
Concrete Deck with 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	1-105	-	-	-	-	-
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 with VapAir Seal 725TR 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	-	-	-	-	-
(Celcore) Cellular Lightweight Insulating Concrete Over Steel Decking (Min. 22 Gauge)									
FM Approved	Loose laid	Min. 2" StormBase	17 (1.8 sq. ft)	1-105	-	-	-	-	-
(Celcore) Cellular Lightweight Insulating Concrete Over Concrete Decking									
Min. 1/2" InsulBase Polyiso	4" ribbons of FAST	Min. 2" StormBase	4" ribbons of FAST	1-105	-	-	-	-	-

FM Approvals
 FleeceBACK™ Adhered Roofing Systems
 Membrane Adhered with HydroBond™ Water-Based Bonding Adhesive

StormBase - Recover

Membrane Type: Sure-Seal FleeceBACK - 100, 115 or 145 membrane (black EPDM)
 Sure-White FleeceBACK - 100, 115 or 145 membrane (white EPDM)
 Sure-Weld FleeceBACK - 100, 115 or 135 membrane (TPO)
 Sure-Flex PVC FleeceBACK - 105, 115 or 135 membrane (white PVC)
 Sure-Flex PVC KEE HP FleeceBACK - 105, 115 or 135 membrane (white PVC)

Membrane Adhesive: HydroBond™ Water-Based Bonding Adhesive

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

Base Insulation Layer	Base Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Top Insulation Layer	Top Layer Fastening (mechanically fastened see notes 13, 14 & 15)	Rating	Sure-Seal EPDM	Sure-White EPDM	Sure-Weld TPO	Sure-Flex PVC	Sure-Flex PVC KEE HP
					RoofNAV Number				
Concrete Deck									
Min. 1/2" InsulBase Polyiso	12" ribbons of FAST	Min. 2" StormBase	12" ribbons of FAST	1-105	-	-	-	-	-

Note: 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. Direct membrane application over existing EPDM single-ply only.

FleeceBACK Adhered with HydroBond Bonding Adhesive
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.
2. 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. DELETED
11. 7/16" thick non-veneer, APA rated oriented strand board (OSB) may be substituted for Carlisle HP Recovery Board in all listed assemblies. The fastening pattern for the OSB must conform with Carlisle Detail FB-27-C (when mechanically fastened).
12. Acceptable G2 Base Sheets can be one of the following: Celotex Type G2 Vaporbar GB, GAF Gafglas No. 75 Base Sheet, Manville Glasbase, Owens Corning Perma Ply No. 28 or Tamko Glass Base. Carlisle's FR Base Sheet 2S is also acceptable.
13. Sure-Seal HP fastener/Sure-Seal Insulation plate.
14. InsulFAST fastener/Sure-Seal Insulation plate.
15. InsulFAST fastener/SecurFAST Insulation Fastening plate.
16. 80 ksi with one fastener per attachment point.
17. 80 ksi with two fasteners per attachment point.

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

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

Carlisle, Sure-Seal EPDM FleeceBACK, Sure-White EPDM FleeceBACK, Sure-Weld TPO FleeceBACK, Sure-Flex PVC FleeceBACK and Sure-Flex KEE HP FleeceBACK

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