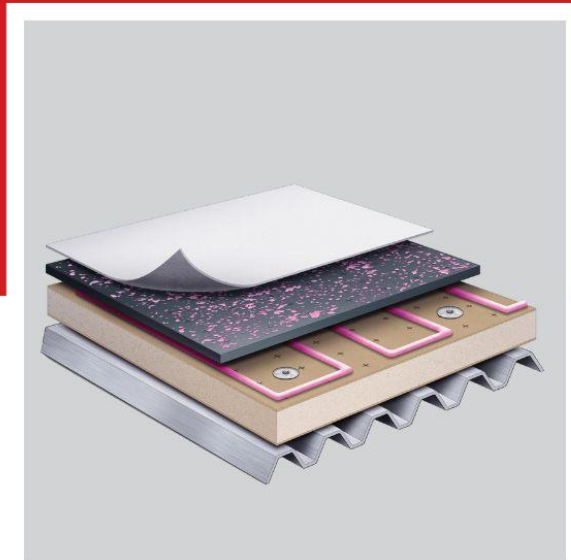


# FM Very Severe Hail (VSH) rated

*EverGuard<sup>®</sup> TPO Assemblies over Steel  
and Concrete Decks\**



**EveryGuard<sup>®</sup> TPO VSH  
Assemblies over Steel  
& Concrete Decks**

## **Introduction**

Thank you for consulting the **FM Very Severe Hail (VSH) rated EverGuard® TPO Assemblies over Steel and Concrete Decks\*** This document provides a quick reference to GAF's most commonly used FM VSH rated assemblies. Always confirm system FM rating and assembly specifics at [RoofNav.com](https://www.roofnav.com) before installing.

Please contact your GAF Territory Manager or the GAF Design Services team at 1-800-GAF-ROOF or [DesignServices@gaf.com](mailto:DesignServices@gaf.com) with any questions.

\*Systems approved under FM 4470 - Very Severe Hail (Class 1-VSH). See FM Global Data Sheet 1-34 for more information. Visit [RoofNav.com](https://www.roofnav.com) for approved assemblies.

## Important Notes:

EverGuard Extreme® TPO Membrane may be substituted for EverGuard® TPO Membrane. Refer to tables for minimum thickness requirements.

EnergyGuard™ HD Barrier Polyiso Insulation may be used in place of EnergyGuard™ HD Polyiso Insulation.

EPS is not approved for flute fill.

See specific RoofNav assemblies for alternative insulation and adhesive options.

See specific RoofNav assemblies for insulation fastener and plate options.

GAF warranties and guarantees do not provide coverage against hail or other impact. See applicable guarantee or warranty, available at [gaf.com](http://gaf.com), for complete coverage and restrictions. Hail or puncture resistance coverage may be available for purchase for eligible systems. Contact GAF for more information.

FM uplift ratings are provided for reference purposes only. GAF warranties and guarantees do not cover leaks or other damage caused by wind speeds in excess of 55 mph. See applicable guarantee or warranty, available at [gaf.com](http://gaf.com), for complete coverage and restrictions. Enhanced wind speed coverage may be available for purchase for eligible systems. Contact GAF for more information.

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OlyBond® is a registered trademark of OMG, Inc.

<b>Steel Deck (Min. 22 ga., 33 ksi, Max. 72" Span)</b>		
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**Table 1**  
*EverGuard® Smooth TPO (min. 60 mil)*

<b>Mechanically Fastened Polyiso and Adhered Cover Board</b>						
Insulation / Insulation Securement					Membrane Securement	
Uplift Rating (Hail)	Base Layer(s) (Top layer must meet min. requirements)	Base Layer Securement (4' x 8' board)	Cover Board	Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #
<b>1-60</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	6 (5.33 sq. ft.)	DEXcell FA VSH™	Olybond500®	SBA #1121	516135-0-0
					Low VOC	516054-0-0
<b>1-60</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	6 (5.33 sq. ft.)	Min. 19/32" Plywood	Olybond500®	SBA #1121	481647-0-0
					Low VOC	481648-0-0
<b>1-75</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	8 (4 sq. ft.)	DensDeck® StormX™	Olybond500®	SBA #1121	492956-0-0
					Quick Spray/LV 50	
					Low VOC	492933-0-0
					WB 181	492931-0-0
<b>1-75</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	8 (4 sq. ft.)	DEXcell FA VSH™	LRF-M	SBA #1121	516153-0-0
					Quick Spray/LV 50	516160-0-0
					Low VOC	516126-0-0
<b>1-75</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DensDeck® StormX™	Olybond500®	SBA #1121	492954-0-0
					Quick Spray/LV 50	
					Low VOC	492925-0-0
					WB 181	492923-0-0
<b>1-75</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DEXcell FA VSH™	Olybond500®	SBA #1121	516151-0-0
					Quick Spray/LV 50	516158-0-0
					Low VOC	516073-0-0

**Table 1 - Continued**  
*EverGuard® Smooth TPO (min. 60 mil)*

Mechanically Fastened Polyiso and Adhered Cover Board						
Insulation / Insulation Securement					Membrane Securement	
Uplift Rating (Hail)	Base Layer(s) (Top layer must meet min. requirements)	Base Layer Securement (4' x 8' board)	Cover Board	Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	8 (4 sq. ft.)	DEXcell FA VSH™	Olybond500®	SBA #1121	516137-0-0
					Low VOC	516056-0-0
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	8 (4 sq. ft.)	Min. 19/32" Plywood	Olybond500®	SBA #1121	434569-0-0
					Low VOC	434572-0-0
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DensDeck® StormX™	Olybond500®	SBA #1121	492961-0-0
					Quick Spray/LV 50	
					Low VOC	492982-0-0
					WB 181	492972-0-0
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DEXcell FA VSH™	LRF-M	Quick Spray/LV 50	516162-0-0
				Olybond500® LRF-M	Low VOC	516128-0-0
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	DensDeck® StormX™	Olybond500®	SBA #1121	492921-0-0
					Low VOC	492920-0-0
					WB 181	492922-0-0
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	DEXcell FA VSH™	Olybond500®	SBA #1121	516138-0-0
					Quick Spray/LV 50	516157-0-0
					Low VOC	
				LRF-M	SBA #1121	516152-0-0
					Quick Spray/LV 50	516159-0-0

**Table 1 - Continued**  
*EverGuard® Smooth TPO (min. 60 mil)*

**Mechanically Fastened Polyiso and Adhered Cover Board**

Insulation / Insulation Securement					Membrane Securement	
Uplift Rating (Hail)	Base Layer(s) (Top layer must meet min. requirements)	Base Layer Securement (4' x 8' board)	Cover Board	Cover Board Securement (12' o.c. beads)	Adhesive	Roof Nav #
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	Min. 19/32" Plywood	Olybond500*	SBA #1121	434563-0-0
					Low VOC	434568-0-0
<b>1-105</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	Min. 19/32" Plywood	Olybond500*	SBA #1121	481660-0-0
					Low VOC	481662-0-0
<b>1-135</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	18 (1.78 sq. ft.)	Min. 19/32" Plywood	Olybond500*	SBA #1121	481663-0-0
					Low VOC	481664-0-0
<b>1-165</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	22 (1.45 sq. ft.)	Min. 19/32" Plywood	Olybond500*	SBA #1121	481665-0-0
					Low VOC	481666-0-0

**Table 2**  
**EverGuard® Smooth TPO (min. 60 mil)**

**Mechanically Fastened Base Layer of Polyiso, Adhered Intermediate Layer of Polyiso, and Adhered Cover Board**

Insulation / Insulation Securement						Membrane Securement		
Uplift Rating (Hail)	Base Layer(s) (Top layer must meet min. requirements)	Base Layer Securement (4' x 8' boards)	Intermediate Layer(s)	Cover Board	Intermediate Layer & Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #	
<i>"The total insulation thickness (mechanically fastened and ribbon adhered) cannot exceed 12"</i>								
<b>1-90</b> (VSH)	2" - 8" EnergyGuard™ Polyiso	8 (4 sq. ft.)	1.5" - 8" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M	SBA #1121	492941-0-0	
						Quick Spray /LV 50	492958-0-0	
						Low VOC	492939-0-0	
						WB 181	492937-0-0	
<b>1-90</b> (VSH)	2" - 8" EnergyGuard™ Polyiso	8 (4 sq. ft.)	1.5" - 8" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	LRF-M	SBA #1121	516154-0-0	
						Quick Spray /LV 50	516161-0-0	
						Low VOC	516131-0-0	
<b>1-90</b> (VSH)	1.5" - 8" EnergyGuard™ Polyiso	16 (2 sq. ft.)	1/2" - 8" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M	SBA #1121	492957-0-0	
						Quick Spray /LV 50		
						Low VOC		492938-0-0
						WB 181		492936-0-0
<b>1-90</b> (VSH)	1.5" - 8" EnergyGuard™ Polyiso	16 (2 sq. ft.)	1.5" - 4" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	Olybond500®	SBA #1121	516150-0-0	
						Quick Spray /LV 50	516156-0-0	
						Low VOC	516072-0-0	



**Table 3**  
*EverGuard® Fleece-back TPO (min. 60/80 mil)*

**Loose Laid Polyiso and Mechanically Fastened Cover Board**

Insulation / Insulation Securement				Membrane Securement	
Uplift Rating (Hail)	Base Layer(s) (Loose Laid)	Cover Board	Cover Board Securement (4' x 8' board)	Adhesive	Roof Nav #
<i>*Minimum 80 mil fleece-back membrane required</i>					
<i>**Thermal Barrier Optional</i>					
<b>1-60</b> (VSH)	1" - 4.6" EnergyGuard™ Polyiso	DensDeck® StormX™	8 (4 sq. ft.)	Olybond500® Canister	524240-0-0
<b>1-75</b> (VSH)	1" - 12" EnergyGuard™ Polyiso	DensDeck® StormX™	12 (2.7 sq. ft.)	Olybond500® Canister	524241-0-0
				LRF-XF	520058-0-0
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	Min. 19/32" Plywood	8 (4 sq. ft.) (XHD Fasteners)	Olybond500® Canister	519288-0-0**
		Min. 7/16" OSB			
<b>1-90</b> (VSH)	1" - 4.6" EnergyGuard™ Polyiso	DensDeck® StormX™	8 (4 sq. ft.)	Olybond500® Canister	524242-0-0
				LRF-XF	520060-0-0
<b>1-90</b> (VSH)	1" - 4.6" EnergyGuard™ Polyiso	DensDeck® StormX™	10 (3.2 sq. ft.)	Olybond500® Canister	520185-0-0
				LRF-XF	520059-0-0
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	DEXcell FA VSH™	16 (2 sq. ft.)	Olybond500® Canister	516051-0-0*
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	DensDeck® StormX™	16 (2 sq. ft.)	Olybond500® Canister	520196-0-0

**Table 3 - Continued**  
*EverGuard® Fleece-back TPO (min. 60/80 mil)*

Loose Laid Polyiso and Mechanically Fastened Cover Board					
Insulation / Insulation Securement				Membrane Securement	
Uplift Rating (Hail)	Base Layer(s) (Loose Laid)	Cover Board	Cover Board Securement (4' x 8' board)	Adhesive	Roof Nav #
<i>*Minimum 80 mil fleece-back membrane required</i>					
<i>**Thermal Barrier Optional</i>					
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	Min. 19/32" Plywood	16 (2 sq. ft.)	Olybond500® Canister	519290-0-0**
		Min. 7/16" OSB			
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	DEXcell FA VSH™	24 (1.33 sq. ft.)	Olybond500® Canister	516050-0-0
<b>1-105</b> (VSH)	1" - 12" EnergyGuard™ Polyiso	DensDeck® StormX™	18 (1.78 sq. ft.)	Olybond500® Canister	524043-0-0
<b>1-120</b> (VSH)	1" - 12" EnergyGuard™ Polyiso	DensDeck® StormX™	24 (1.33 sq. ft.)	Olybond500® Canister	524244-0-0

**Table 4**  
*EverGuard® Fleece-back TPO (min. 60/80 mil)*

Mechanically Fastened Polyiso and Adhered Cover Board						
Insulation / Insulation Securement					Membrane Securement	
Uplift Rating (Hail)	Base Layer(s) (Top layer must meet min. requirements)	Base Layer Securement (4' x 8' board)	Cover Board	Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #
<i>*Minimum 80 mil fleece-back membrane required</i>						
<b>1-60</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	6 (5.33 sq. ft.)	DEXcell FA VSH™	Olybond500®	Olybond500® Canister	515867-0-0
<b>1-60</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	6 (5.33 sq. ft.)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	487302-0-0*
			Min. 7/16" OSB			
<b>1-60</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DensDeck® StormX™	Olybond500® LRF-M LRF-XF	Olybond500® Canister	493411-0-0
					LRF-XF	
					LRF-M/LRF-O	
<b>1-60</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DEXcell FA VSH™	LRF-XF	Olybond500® Canister	515892-0-0
<b>1-75</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DensDeck® StormX™	Olybond500®	WB 181	492998-0-0
<b>1-75</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	10 (3.2 sq. ft.)	DEXcell FA VSH™	Olybond500®	Olybond500® Canister	515883-0-0
<b>1-75</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	12 (2.67 sq. ft.)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	487304-0-0*
			Min. 7/16" OSB			
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	8 (4 sq. ft.)	DEXcell FA VSH™	Olybond500®	Olybond500® Canister	515866-0-0

**Table 4**  
**EverGuard® Fleece-back TPO (min. 60/80 mil) – Continued**

Mechanically Fastened Polyiso and Adhered Cover Board						
Insulation / Insulation Securement					Membrane Securement	
Uplift Rating (Hail)	Base Layer(s) (Top layer must meet min. requirements)	Base Layer Securement (4' x 8' board)	Cover Board	Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #
<i>*Minimum 80 mil fleece-back membrane required</i>						
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	8 (4 sq. ft.)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	434581-0-0*
			Min. 7/16" OSB			
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	11 (2.9 sq. ft.)	DensDeck® StormX™	Olybond500® LRF-M LRF-XF	Olybond500® Canister	493410-0-0
					LRF-XF	
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	11 (2.9 sq. ft.)	DEXcell FA VSH™	LRF-XF	Olybond500® Canister	515891-0-0
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	DEXcell FA VSH™	Olybond500®	Olybond500® Canister	515865-0-0
				LRF-M	Olybond500® Canister	515885-0-0
				LRF-XF	Olybond500® Canister	515889-0-0
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	434580-0-0*
			Min. 7/16" OSB			
<b>1-105</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	487310-0-0*
			Min. 7/16" OSB			
<b>1-135</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	18 (1.78 sq. ft.)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	487312-0-0*
			Min. 7/16" OSB			
<b>1-165</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	22 (1.45 sq. ft.)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	487314-0-0*
			Min. 7/16" OSB			

**Table 5**  
*EverGuard® Fleece-back TPO (min. 60 mil)*

**Mechanically Fastened Base Layer of Polyiso, Adhered Intermediate Layer of Polyiso, and Adhered Cover Board**

Insulation / Insulation Securement

Membrane Securement

Uplift Rating (Hail)	Base Layer(s) (Top layer must meet min. requirements)	Base Layer Securement (4' x 8' board)	Intermediate Layer(s)	Cover Board	Intermediate Layer & Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #
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*"The total insulation thickness (mechanically fastened and ribbon adhered) cannot exceed 12"*

<b>1-90</b> (VSH)	2" - 8" EnergyGuard™ Polyiso	8 (4 sq. ft.)	1.5" - 8" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	LRF-M	Olybond500® Canister	515886-0-0
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	11 (2.9 sq. ft.)	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M LRF-XF	Olybond500® Canister  LRF-XF	493409-0-0
<b>1-90</b> (VSH)	2" - 12" EnergyGuard™ Polyiso	11 (2.9 sq. ft.)	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	LRF-XF	Olybond500® Canister	515890-0-0
<b>1-90</b> (VSH)	1.5" - 8" EnergyGuard™ Polyiso	16 (2 sq. ft.)	1/2" - 8" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M LRF-XF	Olybond500® Canister  LRF-XF	493407-0-0
					Olybond500® LRF-M	LRF-M/LRF-O  WB 181	493396-0-0
<b>1-90</b> (VSH)	1.5" - 8" EnergyGuard™ Polyiso	16 (2 sq. ft.)	1.5" - 4" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	Olybond500®	Olybond500® Canister	515884-0-0
<b>1-90</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso	16 (2 sq. ft.)	1/2" - 12" EnergyGuard™ Polyiso	DEXcell FA VSH™	LRF-XF	Olybond500® Canister	515888-0-0

**Table 6**  
*EverGuard® Smooth TPO (min. 60 mil)*

Adhered Polyiso and Adhered Cover Board					
Insulation / Insulation Securement				Membrane Securement	
Uplift Rating (Hail)	Base Layer(s)	Cover Board	Insulation & Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #
<b>1-495</b> (VSH)	2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	Olybond500® LRF-M	SBA #1121	517357-0-0
<b>1-495</b> (VSH)	2" - 4.6" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	Olybond500® LRF-M	Low VOC	517364-0-0
<b>1-465</b> (VSH)	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500®	SBA #1121	493429-0-0
				Quick Spray/LV 50	
				WB 181	
				Low VOC	
<b>1-360</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	Min. 19/32" Plywood	Olybond500®	SBA #1121	434574-0-0
				Low VOC	434577-0-0
<b>1-270</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	Olybond500®	SBA #1121	517359-0-0
<b>1-195</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	Olybond500® LRF-M	SBA #1121	517362-0-0
				Quick Spray/LV 50	
				Low VOC	

**Table 7**  
*EverGuard® Fleece-back TPO (min. 60/80 mil)*

<b>Adhered Polyiso and Adhered Cover Board</b>					
Insulation / Insulation Securement				Membrane Securement	
Uplift Rating (Hail)	Base Layer(s)	Cover Board	Insulation & Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #
<i>*Minimum 80 mil fleece-back membrane required</i>					
<b>1-450</b> (VSH)	1.5" - 4" EnergyGuard™ Polyiso (4' x 4' boards)	DEXcell FA VSH™	Olybond500®	Olybond500® Canister	517356-0-0
<b>1-360</b> (VSH)	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards, 2 layers)	DEXcell FA VSH™	Olybond500® LRF-M	Olybond500® Canister	517353-0-0
<b>1-360</b> (VSH)	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M	LRF-M/LRF-O	493517-0-0
			Olybond500® LRF-M LRF-XF	Olybond500® Canister  LRF-XF	493523-0-0
<b>1-360</b> (VSH)	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	434582-0-0*
		Min. 7/16" OSB			
<b>1-270</b> (VSH)	1.5" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500®	WB 181	493512-0-0

**Table 8**  
*EverGuard® Smooth TPO (min. 60 mil)*  
**RECOVER**

<b>Adhered Cover Board (NO Polyiso)</b>						
Insulation / Insulation Securement				Membrane Securement		
Existing Deck	Existing Roof Cover / Surface	Cover Board	Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #	Uplift Rating (Hail)
Min. 22ga, 33ksi	<u>Cover:</u> Built-Up <u>Surface:</u> Any	DensDeck® StormX™	Olybond500®	SBA #1121	493822-0-0	<b>1-90</b> (VSH)
				WB 181		
				Low VOC	493814-0-0	
	<u>Cover:</u> Any <u>Surface:</u> Smooth	Min. 19/32" Plywood	Olybond500®	SBA #1121	442932-0-0	<b>1-90</b> (VSH)
				Low VOC (3 square)		
	<u>Cover:</u> Any <u>Surface:</u> Gravel/Slag	Min. 19/32" Plywood	Olybond500®	SBA #1121	442933-0-0	<b>1-90</b> (VSH)
Low VOC (3 square)						
Structural Concrete	<u>Cover:</u> Any <u>Surface:</u> Asphalt	DensDeck® StormX™	Olybond500®	SBA #1121	493807-0-0	<b>1-240</b> (VSH)
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Asphalt	DensDeck® StormX™	Olybond500®	SBA #1121	493820-0-0	<b>1-240</b> (VSH)
				WB 181		
	<u>Cover:</u> Any <u>Surface:</u> Gravel/Slag	Min. 19/32" Plywood	Olybond500®	SBA #1121	442930-0-0	<b>1-150</b> (VSH)
		Min. 7/16" OSB		Low VOC (3 square)		
	<u>Cover:</u> Any <u>Surface:</u> Smooth	Min. 19/32" Plywood	Olybond500®	SBA #1121	442931-0-0	<b>1-150</b> (VSH)
Min. 7/16" OSB		Low VOC (3 square)				



**Table 9**  
EverGuard<sup>®</sup> Smooth TPO (min. 60 mil)  
RECOVER

Adhered Polyiso and Adhered Cover Board							
Insulation / Insulation Securement					Membrane Securement		
Existing Deck	Existing Roof Cover / Surface	Base Layer(s)	Cover Board	Insulation & Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #	Uplift Rating (Hail)
Structural Concrete	<u>Cover:</u> Any <u>Surface:</u> Mineral	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500®	SBA #1121	493548-0-0	<b>1-450</b> (VSH)
					WB 181	493547-0-0	
					Low VOC	493549-0-0	
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Smooth	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M	SBA #1121	493531-0-0	<b>1-450</b> (VSH)
					WB 181		
					Low VOC	493532-0-0	
	<u>Cover:</u> Build-Up <u>Surface:</u> Asphalt	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M	SBA #1121	493533-0-0	<b>1-450</b> (VSH)
					WB 181		
					Low VOC	493534-0-0	
	<u>Cover:</u> Built-Up <u>Surface:</u> Smooth	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500®	SBA #1121	493553-0-0	<b>1-450</b> (VSH)
					WB 181	493551-0-0	
					Low VOC	493555-0-0	

**Table 10**  
**EverGuard® Fleece-back TPO (min. 60/80 mil)**  
**RECOVER**

<b>Adhered Cover Board (NO Polyiso)</b>						
<b>Insulation / Insulation Securement</b>				<b>Membrane Securement</b>		
<b>Existing Deck</b>	<b>Existing Roof Cover / Surface</b>	<b>Cover Board</b>	<b>Cover Board Securement (12" o.c. beads)</b>	<b>Adhesive</b>	<b>Roof Nav #</b>	<b>Uplift Rating (Hail)</b>
<b>*Minimum 80 mil fleece-back membrane required</b>						
<b>Structural Concrete</b>	<u>Cover:</u> Built-Up <u>Surface:</u> Smooth	DensDeck® StormX™	Olybond500® LRF-XF	LRF-M/LRF-O	493847-0-0	<b>1-360</b> (VSH)
				LRF-XF	493872-0-0	
	<u>Cover:</u> Built-Up <u>Surface:</u> Mineral	DensDeck® StormX™	Olybond500® LRF-XF	LRF-M/LRF-O	493848-0-0	<b>1-360</b> (VSH)
				LRF-XF	493873-0-0	
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Mineral	DensDeck® StormX™	Olybond500® LRF-XF	LRF-M/LRF-O	493850-0-0	<b>1-360</b> (VSH)
				LRF-XF	493875-0-0	
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Any	DensDeck® StormX™	Olybond500® LRF-XF	LRF-M/LRF-O	493852-0-0	<b>1-360</b> (VSH)
				LRF-XF	493877-0-0	
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Asphalt	DensDeck® StormX™	Olybond500®	WB 181	493829-0-0	<b>1-240</b> (VSH)
	<u>Cover:</u> Any <u>Surface:</u> Smooth	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	442935-0-0*	<b>1-150</b> (VSH)
Min. 7/16" OSB						
<u>Cover:</u> Any <u>Surface:</u> Gravel/Slag	Min. 19/32" Plywood	Olybond500®	Olybond500® Canister	442936-0-0*	<b>1-150</b> (VSH)	

**Table 10 - Continued**  
EverGuard<sup>®</sup> Fleece-back TPO (min. 60/80 mil)  
RECOVER

Adhered Cover Board (NO Polyiso)						
Insulation / Insulation Securement				Membrane Securement		
Existing Deck	Existing Roof Cover / Surface	Cover Board	Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #	Uplift Rating (Hail)
<i>*Minimum 80 mil fleece-back membrane required</i>						
Min. 22ga, 33ksi	<u>Cover:</u> Built-Up <u>Surface:</u> Any	DensDeck <sup>®</sup> StormX <sup>™</sup>	Olybond500 <sup>®</sup>	WB 181	493831-0-0	<b>1-90</b> (VSH)
	<u>Cover:</u> Any <u>Surface:</u> Smooth	Min. 19/32" Plywood	Olybond500 <sup>®</sup>	Olybond500 <sup>®</sup> Canister	442926-0-0*	<b>1-90</b> (VSH)
		Min. 7/16" OSB				
	<u>Cover:</u> Any <u>Surface:</u> Gravel/Slag	Min. 19/32" Plywood	Olybond500 <sup>®</sup>	Olybond500 <sup>®</sup> Canister	442927-0-0*	<b>1-90</b> (VSH)
Min. 7/16" OSB						

**Table 11**  
*EverGuard® Fleece-back TPO (min. 60 mil)*  
**RECOVER**

Adhered Polyiso and Adhered Cover Board							
Insulation / Insulation Securement					Membrane Securement		
Existing Deck	Existing Roof Cover/Surface	Base Layer(s)	Cover Board	Insulation & Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #	Uplift Rating (Hail)
Structural Concrete	<u>Cover:</u> Built-Up <u>Surface:</u> Asphalt	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500®	WB 181	493712-0-0	<b>1-465</b> (VSH)
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Smooth	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M	WB 181	493710-0-0	<b>1-450</b> (VSH)
	<u>Cover:</u> Multi-Ply <u>Surface:</u> Mineral	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500® LRF-M	WB 181	493708-0-0	<b>1-450</b> (VSH)
	<u>Cover:</u> Any <u>Surface:</u> Mineral	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500®	WB 181	493748-0-0	<b>1-450</b> (VSH)
	<u>Cover:</u> Built-Up <u>Surface:</u> Smooth	1/2" - 12" EnergyGuard™ Polyiso (4' x 4' boards)	DensDeck® StormX™	Olybond500®	WB 181	493750-0-0	<b>1-450</b> (VSH)
					Olybond500® Canister	493753-0-0	
					LRF-XF		
					LRF-M/LRF-O	493733-0-0	

**Table 11 - Continued**  
EverGuard<sup>®</sup> Fleece-back TPO (min. 60 mil)  
RECOVER

Adhered Polyiso and Adhered Cover Board							
Insulation / Insulation Securement					Membrane Securement		
Existing Deck	Existing Roof Cover/Surface	Base Layer(s)	Cover Board	Insulation & Cover Board Securement (12" o.c. beads)	Adhesive	Roof Nav #	Uplift Rating (Hail)
Structural Concrete	<u>Cover:</u> Built-Up <u>Surface:</u> Mineral	1/2" - 12" EnergyGuard <sup>™</sup> Polyiso (4' x 4' boards)	DensDeck <sup>®</sup> StormX <sup>™</sup>	Olybond500 <sup>®</sup> LRF-XF	Olybond500 <sup>®</sup> Canister	493754-0-0	<b>1-360</b> (VSH)
					LRF-XF		
					LRF-M/LRF-O	493734-0-0	
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Mineral	1/2" - 12" EnergyGuard <sup>™</sup> Polyiso (4' x 4' boards)	DensDeck <sup>®</sup> StormX <sup>™</sup>	Olybond500 <sup>®</sup> LRF-XF	Olybond500 <sup>®</sup> Canister	493756-0-0	<b>1-360</b> (VSH)
					LRF-XF		
					LRF-M/LRF-O	493736-0-0	
	<u>Cover:</u> Modified Bitumen <u>Surface:</u> Any	1/2" - 12" EnergyGuard <sup>™</sup> Polyiso (4' x 4' boards)	DensDeck <sup>®</sup> StormX <sup>™</sup>	Olybond500 <sup>®</sup> LRF-XF	Olybond500 <sup>®</sup> Canister	493758-0-0	<b>1-360</b> (VSH)
					LRF-XF		
					LRF-M/LRF-O	493738-0-0	

**Table 12**

FM Glossary Definitions for Recover Assemblies\*

<p><b>Asphalt</b></p>	<p>Asphalt is a dark brown or black substance found in a natural state or, more commonly, left as a residue after evaporating or otherwise processing crude oil or petroleum. Asphalt may be further refined to conform to various roofing grade specifications: <b>Dead-Level Asphalt:</b> a roofing asphalt conforming to the requirements of ASTM Specification D312 Type I. <b>Flat Asphalt:</b> a roofing asphalt conforming to the requirements of ASTM Specification D312, Type II. <b>Steep Asphalt:</b> a roofing asphalt conforming to the requirements of ASTM Specifications D312, Type III. <b>Special Steep Asphalt:</b> a roofing asphalt conforming to the requirements of ASTM Specification D 312, Type IV.</p>
<p><b>Built-Up Roof</b></p>	<p>A built-up roof (BUR) is a continuous semi-flexible roof membrane consisting of multiple plies of saturated felts, coated felts, fabrics, or mats assembled in place with alternate layers of bitumen. An FM Approved BUR shall be surfaced with mineral aggregate, bituminous materials, a liquid-applied coating, or a granule-surfaced cap sheet.</p>
<p><b>Existing Roof</b></p>	<p>Existing roof is used to describe recover roof assemblies where all components are fully adhered to or mechanically fastened through the existing roof. Because no fasteners are used, further description of deck type is not required.</p>
<p><b>Modified Bitumen</b></p>	<p>Modified bitumen is an asphalt or coal tar with the inclusion of one or more polymers.</p>
<p><b>Multi-Ply Roof Cover</b></p>	<p>Multi-ply roof coverings consist of several layers of base, ply, and/or cap sheets that are adhered to each other with an adhesive and together form a thick multi-layer weatherproof roof covering. The single sheets consist of a reinforcement which is saturated and/or coated with an asphaltic or coal tar material.</p> <ul style="list-style-type: none"> <li>• Multi-ply roof construction generally consists of a 2- to 5-ply built up roof (BUR), modified bitumen roofs with a modified bitumen base and cap sheet or they may consist of a combination of BUR and modified bitumen products.</li> <li>• When hot asphalt is used as the adhesive, unless otherwise noted in the specific listing, it is applied at a nominal rate of 25 lb/sq (1.2 kg/m<sup>2</sup>).</li> </ul>
<p><b>Roof Cover</b></p>	<p>A roof cover is the exterior surface of a roof assembly.</p>
<p><b>Surfacing</b></p>	<p>Surfacing is the top layer or layers of a roof covering. It may be specified or designed to protect the underlying roofing from direct exposure to the weather.</p>
<p>*These and other definitions can be found in the <a href="#">RoofNav Glossary of Terms</a> and are provided solely in connection with this guide, for reference purposes only.</p>	