










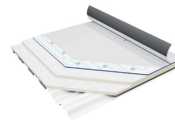
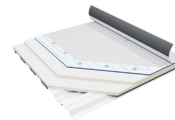
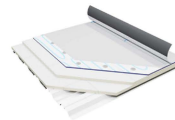
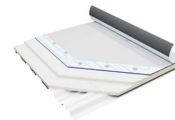













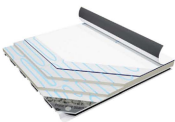
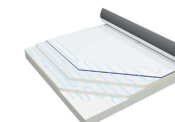
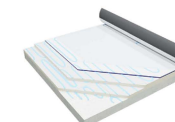
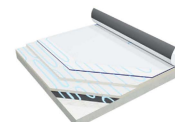
















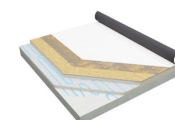
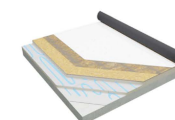
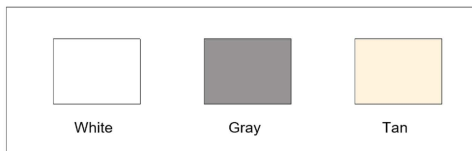


VSH Rated FleeceBACK® & Sure-Weld® Extra (80-MIL) TPO Roof Families

Sure-Weld® FleeceBACK® TPO assemblies with EcoStorm™ Coverboard					Sure-Weld® FleeceBACK® TPO assemblies with StormBase® Coverboard/Polyiso Composite				
Metal Deck					Metal Deck				
Adhered Membrane Fastened Insulation	Adhered Membrane Fastened Insulation	Adhered Membrane Fastened Insulation	Adhered Membrane Fastened Insulation	Adhered Membrane Fastened Insulation	Adhered Membrane Fastened Insulation W/ Optional Air/Vapor Barrier	Adhered Membrane Fastened Insulation W/ Optional Air/Vapor Barrier	Adhered Membrane Adhered Insulation Top Layer Fastened Bottom Layer W/ Optional Air/Vapor Barrier	Fully Adhered Membrane, Insulation, & Air/Vapor Barrier W/ Fastened Thermal Barrier	Fully Adhered Membrane, Insulation, & Air/Vapor Barrier W/ Fastened Thermal Barrier
									
									
Adhered Membrane Fastened Insulation		Adhered Membrane Adhered Insulation W/ Air/Vapor Barrier & Fastened Thermal Barrier		Concrete Deck		Concrete Deck			
		Fully Adhered	Fully Adhered	Fully Adhered w/ Bitumenous Air/Vapor Barrier	Fully Adhered	Fully Adhered w/ Air/Vapor Barrier			
									
									
Sure-Weld® Extra TPO assemblies with EcoStorm™ Coverboard					Sure-Weld® Extra TPO assemblies with StormBase® Coverboard/Polyiso Composite				
Metal Deck		Concrete Deck			Metal Deck		Concrete Deck		
Adhered Membrane Fastened Insulation	Adhered Membrane Adhered Insulation W/ Air/Vapor Barrier & Fastened Thermal Barrier	Fully Adhered	Adhered Membrane Fastened Insulation W/ Optional Air/Vapor Barrier		Adhered Membrane Fastened Insulation Base Layer W/ Optional Air/Vapor Barrier	Adhered Membrane Fastened Insulation W/ Optional Air/Vapor Barrier	Fully Adhered	Fully Adhered w/ Air/Vapor Barrier	
									
									

Standard Colors



Special Colors



TPO VSH Rated Roof Type Schedule

Type	FM Global Rating Number	Wind Pressure Uplift Rating	Type Comments	Manufacturer
TPO Extra - FM 461126-0-0	461126-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 439042-0-0	439042-0-0	-150	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461168-0-0	461168-0-0	-225	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. coverboard thickness.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461167-0-0	461167-0-0	-165	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. coverboard thickness.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461164-0-0	461164-0-0	-120	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. coverboard thickness.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461162-0-0	461162-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. coverboard thickness.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461307-0-0	461307-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. coverboard thickness.	Carlisle SynTec Systems
FleeceBACK TPO - FM 519865-0-0	519865-0-0	-285	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461192-0-0	461192-0-0	-705	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461295-0-0	461295-0-0	-315	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461314-0-0	461314-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard/thermal barrier thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 461114-0-0	461114-0-0	-270	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. coverboard thickness.	Carlisle SynTec Systems
TPO Extra - FM 461120-0-0	461120-0-0	-225	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems

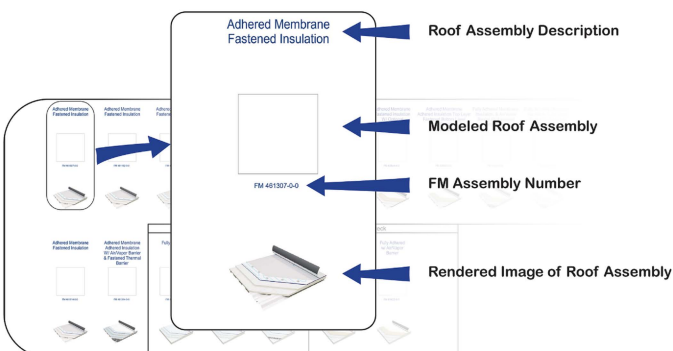
TPO VSH Rated Roof Type Schedule

Type	FM Global Rating Number	Wind Pressure Uplift Rating	Type Comments	Manufacturer
TPO Extra - FM 461154-0-0	461154-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard/thermal barrier thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
TPO Extra - FM 461123-0-0	461123-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 439044-0-0	439044-0-0	-270	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min. insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 439065-0-0	439065-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 439059-0-0	439059-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard/thermal barrier thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 439061-0-0	439061-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard/thermal barrier thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 439020-0-0	439020-0-0	-270	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
FleeceBACK TPO - FM 439022-0-0	439022-0-0	-255	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
TPO Extra - FM 427172-0-0	427172-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
TPO Extra - FM 427201-0-0	427201-0-0	-90	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
Sure Weld Extra - FM 427190-0-0	427190-0-0	-315	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems
Sure Weld Extra - FM 427203-0-0	427203-0-0	-255	See Carlisle VSH Compliant Roofing Systems Code Approval Guide for min./max. adhesive application rates, min. coverboard thicknesses, and minimum insulation thicknesses.	Carlisle SynTec Systems



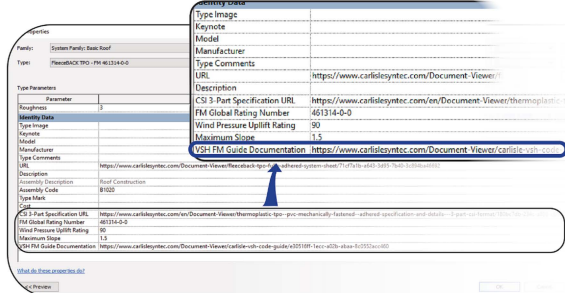
How to Use Very Severe Hail (VSH) Rated FM-Based Roof Assemblies:

Each Roof Assembly can be identified by the following group of elements. Select (single-click) a modeled roof assembly...



Notes About Roof Type Properties:

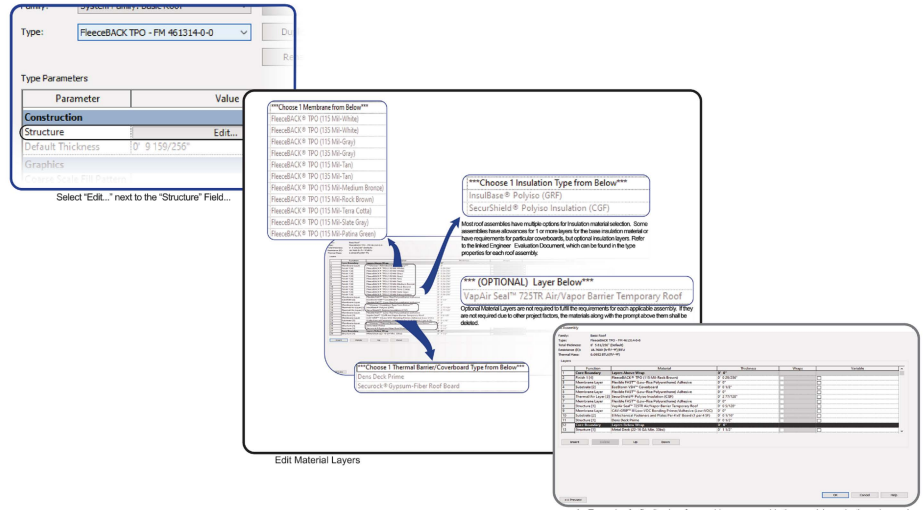
Upon opening the **Type Properties** of the selected roof assembly, several Identity Data Parameters are available. The assemblies provided vary to provide a options in terms of design pressure/wind-uplift rating, membrane types, adhesives, coverboards, roof deck types, etc. but are **not exhaustive**. For additional compliant assembly options, please refer to the linked documentation, which can be found in the **Type Properties** of every roof assembly, as shown in the diagram below.



All Assemblies included within these files have been tested according to FM 4470 for compliance to VSH requirements.

Notes Regarding Assembly Material Editing:

In many cases, each roof assembly will contain multiples materials for a particular function of the roof assembly. Where this occurs, prompts, listed as materials above a grouping of multiple materials, are included within the assembly as can be seen in the sample illustration below. Delete extraneous material layers not desired within the assembly. One-of-a-kind materials, ie: Flexible Fast, Mechanical Fasteners, and Dens Deck Prime, are required materials for this particular roof assembly example. Do not delete them.



Once all the desired materials have been finalized, these prompt materials shall be deleted from the assembly(ies), to avoid conflicts with other functions of Revit, ie: schedules that contain roof assembly material takeoff values.

