

EPDM

System Warranty Availability

Membrane Attachment Method	Membrane Type	Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed	Maximum Hail Diameter	Accidental Puncture
		45-mil	15 YR	90 mph	N/A	N/A
	Sure-Seal (Non-Reinforced)	60-mil	25 YR	120 mph	1 inch	N/A
	(Non-neimorcea)	90-mil	30 YR	120 mph	2 inch	32 hrs
		45-mil	15 YR	90 mph	N/A	8 hrs
Adhered	Sure-Tough (Reinforced)	60-mil	20 YR	120 mph	1 inch	16 hrs
	(neillioiceu)	75-mil	30 YR	120 mph	2 inch	32 hrs
	0 14/1:1	60-mil	25 YR	120 mph	1 inch	N/A
	Sure-White	90-mil	30 YR	120 mph	2 inch	32 hrs
	Sure-Seal (Non-Reinforced) SAT	60-mil	20 YR	100 mph	1 inch	N/A
Self Adhered Sheet	Sure-White SAT	60-mil	20 YR	100 mph	1 inch	N/A
	Sure-Tough (Reinforced) SAT	60-mil	20 YR	100 mph	1 inch	16 hrs
	FleeceBACK EPDM (Sure-Seal)	100-mil	15 YR	120 mph	1 inch	8 hrs
		115-mil	25 YR	120 mph	2 inch	16 hrs
Adhered with Flexible FAST		145-mil	30 YR	120 mph	3 inch	32 hrs
I lexible I AS I	FleeceBACK EPDM (Sure-White)	115-mil	25 YR	120 mph	2 inch	16 hrs
		145-mil	30 YR	120 mph	3 inch	32 hrs
	FleeceBACK AFX	90-mil	20 YR	90 mph	1 inch	8 hrs
Adhered with Asphalt	EPDM (Sure-Seal)	105-mil	25 YR	90 mph	2 inch	16 hrs
Aunereu with Asphalt	FleeceBACK AFX EPDM (Sure-White)	105-mil	25 YR	90 mph	2 inch	16 hrs
Adhered with	51 DAGUEL 50011	115-mil	20 YR	90 mph	2 inch	16 hrs
RapidLock	FleeceBACK RL EPDM	145-mil	30 YR	120 mph	3 inc	32 hrs
		45-mil	25 YR	80 mph	1 inch	N/A
Ballasted	Sure-Seal (Non-Reinforced)	60-mil	30 YR	80 mph	2 inch	N/A
	(Non Homoroca)	90-mil	30 YR	80 mph	3 inch	N/A
		45-mil	15 YR	90 mph	N/A	8 hrs
	Sure-Tough (Reinforced)	60-mil	20 YR	90 mph	N/A	16 hrs
Mechanically	(Holliforda)	75-mil	30 YR	90 mph	N/A	32 hrs
	EL B45::	100-mil	15 YR	72 mph	N/A	8 hrs
Fastened	FleeceBACK EPDM (Sure-Seal)	115-mil	15 YR	72 mph	N/A	16 hrs
	(outo ocal)	145-mil	15 YR	72 mph	N/A	32 hrs
	FleeceBACK EPDM	115-mil	15 YR	72 mph	N/A	16 hrs
	(Sure-White)	145-mil	15 YR	72 mph	N/A	32 hrs

Refer to Carlisle's EPDM or FleeceBACK Specification and Details for required design information for various warranty durations.

Hail coverage requires the use of an approved, adhered cover board: SecurShield HD or HD Plus, SecurShield HD Composite, StormBase Composite, EcoStorm VSH, min. ½" thick DensDeck Prime or DensDeck StormX or min. ½" thick Securock.

When adhering FleeceBACK EPDM using Flexible FAST in full coverage (or beads at 4" o.c.) an extra 4 man hours of Accidental Puncture and an extra 1" of Hail coverage may be available (to a max. of 4").

Carlisle's Accidental Puncture Warranty covers labor hours and material used during the repair. Maximum labor and material hours are dependent upon system design. Refer to the above column for coverage.



TPOSystem Warranty Availability

Membrane Attachment Method	Membrane Type	Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed	Maximum Hail Diameter	Accidental Puncture
	Sure-Weld or	45-mil	15 YR	90 mph	N/A	N/A
	Sure-Weld HS	60-mil	20 YR	120 mph	1 inch	N/A
Adhered	(High Slope)	80-mil	30 YR	120 mph	2 inch	16 hrs
	Sure-Weld HS	60-mil	20 YR	120 mph	1 inch	N/A
	(Special Color TPO)	80-mil	20 YR	120 mph	2 inch	16 hrs
Self Adhered Sheet	O Wald OAT TDO	60-mil	20 YR	100 mph	1 inch	N/A
Sell Adhered Sheet	Sure-Weld SAT TP0	80-mil	30 YR	100 mph	2 inch	16 hrs
		100-mil	15 YR	120 mph	1 inch	8 hrs
	FleeceBACK TP0 (Sure-Weld)	115-mil	25 YR	120 mph	2 inch	16 hrs
Adhered with	(outo wota)	135-mil	30 YR	120 mph	3 inch	32 hrs
Flexible FAST	FleeceBACK TPO (Sure-Weld Special Color)	115-mil	20 YR	120 mph	2 inch	16 hrs
	FleeceBACK AFX (Sure-Weld)	120-mil	15 YR	90 mph	1 inch	N/A
Adhered with Asphalt		135-mil	20 YR	90 mph	2 inch	16 hrs
		155-mil	25 YR	90 mph	2 inch	32 hrs
Adhered with	FleeceBACK RL TPO	115-mil	20 YR	90 mph	2 inch	16 hrs
RapidLock	(Sure-Weld)	135-mil	30 YR	120 mph	3 inch	32 hrs
		45-mil	15 YR	90 mph	N/A	N/A
	Sure-Weld	60-mil	20 YR	90 mph	N/A	N/A
Mechanically		80-mil	30 YR	90 mph	N/A	16 hrs
Fastened	FleeceBACK FR TPO (Sure-Weld Fire Rated)	115-mil	20 YR	72 mph	2 inch*	16 hrs
		45-mil	15 YR	90 mph	N/A	N/A
Induction Welded	Sure-Weld	60-mil	20 YR	90 mph	N/A	N/A
		80-mil	20 YR	90 mph	N/A	16 hrs

Refer to Carlisle's Thermoplastic (TPO/PVC/KEE HP) or FleeceBACK Specification and Details for required design information for various warranty durations.

Hail coverage requires the use of an approved, adhered cover board: SecurShield HD or HD Plus, SecurShield HD Composite, StormBase Composite, EcoStorm VSH, min. ½" thick DensDeck Prime or DensDeck StormX or min. ½" thick Securock.

When adhering FleeceBACK TPO using Flexible FAST in full coverage (or beads at 4" o.c.) an extra 4 man hours of Accidental Puncture and an extra 1" of Hail coverage may be available (to a max. of 3").

Carlisle's Accidental Puncture Warranty covers labor hours and material used during the repair. Maximum labor and material hours are dependent upon system design. Refer to the above column for coverage.

*Follow seam detail FR-2.1 to obtain hail warranty coverage



PVCSystem Warranty Availability

Membrane Attachment Method	Membrane Type	Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed	Maximum Hail Diameter	Accidental Puncture
		50-mil	15 YR	90 mph	N/A	N/A
	Sure-Flex PVC	60-mil	20 YR	120 mph	1 inch	N/A
Nalla a va al		80-mil	25 YR	120 mph	2 inch	16 hrs
Adhered		50-mil	20 YR	90 mph	N/A	N/A
	Sure-Flex KEE HP	60-mil	25 YR	120 mph	1 inch	N/A
		80-mil	30 YR	120 mph	2 inch	16 hrs
		105-mil	15 YR	120 mph	1 inch	N/A
	FleeceBACK PVC (Sure-Flex)	115-mil	20 YR	120 mph	2 inch	16 hrs
Adhered with	(ouro riox)	135-mil	25 YR	120 mph	3 inch	32 hrs
lexible FAST		105-mil	20 YR	120 mph	1 inch	N/A
	FleeceBACK KEE HP (Sure-Flex)	115-mil	25 YR	120 mph	2 inch	16 hrs
	(ouro riox)	135-mil	30 YR	120 mph	3 inch	32 hrs
Adhered with	FleeceBACK RL PVC	115-mil	20 YR	90 mph	2 inch	16 hrs
RapidLock	(Sure-Flex)	135-mil	30 YR	120 mph	3 inch	32 hrs
		50-mil	15 YR	90 mph	N/A	N/A
	Sure-Flex PVC	60-mil	20 YR	90 mph	N/A	N/A
		80-mil	25 YR	90 mph	N/A	16 hrs
		105-mil	15 YR	72 mph	N/A	N/A
	FleeceBACK PVC (Sure-Flex)	115-mil	15 YR	72 mph	N/A	16 hrs
Mechanically	(Oure-riex)	135-mil	15 YR	72 mph	N/A	32 hrs
astened		50-mil	20 YR	90 mph	N/A	N/A
	Sure-Flex KEE HP	60-mil	25 YR	90 mph	N/A	N/A
		80-mil	30 YR	90 mph	N/A	16 hrs
		105-mil	15 YR	72 mph	N/A	N/A
	FleeceBACK KEE HP (Sure-Flex)	115-mil	15 YR	72 mph	N/A	16 hrs
	(53.5 : 15.1)	135-mil	15 YR	72 mph	N/A	32 hrs
		50-mil	15 YR	90 mph	N/A	N/A
	Sure-Flex PVC	60-mil	20 YR	90 mph	N/A	N/A
		80-mil	20 YR	90 mph	N/A	16 hrs
nduction Welded		50-mil	15 YR	90 mph	N/A	N/A
	Sure-Flex KEE HP	60-mil	20 YR	90 mph	N/A	N/A
		80-mil	20 YR	90 mph	N/A	16 hrs

Refer to Carlisle's Thermoplastic (TPO/PVC/KEE HP) or FleeceBACK Specification and Details for required design information for various warranty durations.

Hail coverage requires the use of an approved, adhered cover board: SecurShield HD or HD Plus, SecurShield HD Composite, StormBase Composite, EcoStorm VSH, min. ½" thick DensDeck Prime or DensDeck StormX or min. ½" thick Securock.

When adhering FleeceBACK PVC or KEE HP using Flexible FAST in full coverage (or beads at 4" o.c.) an extra 4 man hours of Accidental Puncture and an extra 1" of Hail coverage may be available (to a max of 3")

Carlisle's Accidental Puncture Warranty covers labor hours and material used during the repair. Maximum labor and material hours are dependent upon system design. Refer to the above column for coverage.



Traditional Roof Garden Systems

Extensive/Shallow Systems Warranty Availability

Membrane Attachment Method	Membrane Type		Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed
		Sure-Seal (Non-Reinforced)	60-mil	15 YR	55 mph
		Suie-Seai (Noii-neililoiceu)	90-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced)	60-mil	15 YR	55 mph
	LFDIVI	Sure-rough (Reilhorcea)	75-mil	20 YR	55 mph
		Sure-White	60-mil	15 YR	55 mph
Adhered		Sui e-willite	90-mil	20 YR	55 mph
Aunereu	TP0	Sure-Weld	60-mil	15 YR	55 mph
	IFU	Sui e-weiu	80-mil	20 YR	55 mph
	PVC	Sure-Flex PVC	60-mil	15 YR	55 mph
	PVG	Sure-Flex PVC	80-mil	20 YR	55 mph
	VEE UD	Sure-Flex KEE HP	60-mil	15 YR	55 mph
	KEE HP		80-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced) SAT	60-mil	15 YR	55 mph
Self Adhered Sheet	TDO	Sure-Weld SAT TP0	60-mil	15 YR	55 mph
	TP0		80-mil	20 YR	55 mph
		Sure-Seal FleeceBACK Sure-White FleeceBACK	115-mil	15 YR	55 mph
	EPDM		145-mil	20 YR	55 mph
	EFDIN		115-mil	15 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TP0	Sure-Weld FleeceBACK	115-mil	15 YR	55 mph
Flexible FAST	IFU		145-mil	20 YR	55 mph
	PVC	Sure-Flex PVC FleeceBACK	115-mil	15 YR	55 mph
	FVG	Suite-Flex FVG FleecedAGK	135-mil	20 YR	55 mph
	VEE UD	Cura Flow VEE LID Floora PACV	115-mil	15 YR	55 mph
	KEE HP	Sure-Flex KEE HP FleeceBACK	135-mil	20 YR	55 mph
	EPDM	Sure-Seal FleeceBACK AFX	105-mil	20 YR	55 mph
Adhered with Asphalt	TP0	Sure-Weld FleeceBACK AFX	135-mil	15 YR	55 mph
	110	Suit-Weiu Fieecedaun Afx	155-mil	20 YR	55 mph
Adharad with Panidlessk	EPDM	FleeceBACK RL EPDM	115-mil	15 YR	55 mph
Adhered with RapidLock	TP0	FleeceBACK RL TPO	115-mil	15 YR	55 mph

Note: Refer to Carlisle's Traditional Roof Garden Specification and Details for required design information for various warranty durations.



Traditional Roof Garden SystemsSemi-Intensive/Medium Systems Warranty Availability

Membrane Attachment Method	Membrane Type		Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed
		Sure-Seal (Non-Reinforced)	90-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced)	75-mil	15 YR	55 mph
Adhered		Sure-White	90-mil	20 YR	55 mph
Aulieleu	TP0	Sure-Weld TP0	80-mil	20 YR	55 mph
	PVC	Sure-Flex PVC	80-mil	20 YR	55 mph
	KEE HP	Sure-Flex KEE HP	80-mil	20 YR	55 mph
		Sure-Seal FleeceBACK	115-mil	15 YR	55 mph
	EPDM		145-mil	20 YR	55 mph
		Sure-White FleeceBACK	115-mil	15 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TP0	Sure-Weld FleeceBACK	115-mil	15 YR	55 mph
Flexible FAST	110		135-mil	20 YR	55 mph
	PVC	Sure-Flex PVC FleeceBACK	115-mil	15 YR	55 mph
	PVG		135-mil	20 YR	55 mph
	KEE HP	HP Sure-Flex KEE HP FleeceBACK	115-mil	15 YR	55 mph
	NEE HP		135-mil	20 YR	55 mph
	EPDM	Sure-Seal FleeceBACK AFX	105-mil	20 YR	55 mph
Adhered with Asphalt	TP0	Sure-Weld FleeceBACK AFX	135-mil	15 YR	55 mph
	170	Suit-Weiu Fieecedaux AFX	155-mil	20 YR	55 mph
Adharad with Danid Laak	EPDM	FleeceBACK RL EPDM	115-mil	15 YR	55 mph
Adhered with RapidLock	TP0	FleeceBACK RL TPO	115-mil	15 YR	55 mph

Note: Refer to Carlisle's Traditional Roof Garden Specification and Details for required design information for various warranty durations.



Traditional Roof Garden Systems Intensive/Deep Systems Warranty Availability

Membrane Attachment Method	Membrane Type		Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed
	EPDM	Sure-Seal (Non-Reinforced)	90-mil	20 YR	55 mph
	EPUIVI	Sure-White	90-mil	20 YR	55 mph
Adhered	TP0	Sure-Weld TPO	80-mil	15 YR	55 mph
	PVC	Sure-Flex PVC	80-mil	15 YR	55 mph
	KEE HP	Sure-Flex KEE HP	80-mil	15 YR	55 mph
		Sure-Seal FleeceBACK	115-mil	15 YR	55 mph
	EPDM		145-mil	20 YR	55 mph
		Sure-White FleeceBACK	115-mil	15 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TP0	Sure-Weld FleeceBACK	115-mil	15 YR	55 mph
Flexible FAST			135-mil	20 YR	55 mph
	PVC	Sure-Flex PVC FleeceBACK	115-mil	15 YR	55 mph
			135-mil	20 YR	55 mph
	1/55 115	Sure-Flex KEE HP FleeceBACK	115-mil	15 YR	55 mph
	KEE HP		135-mil	20 YR	55 mph
	EPDM	Sure-Seal FleeceBACK AFX	105-mil	15 YR	55 mph
Adhered with Asphalt	TP0	Sure-Weld FleeceBACK TP0	135-mil	15 YR	55 mph
A.II	EPDM	FleeceBACK RL EPDM	115-mil	15 YR	55 mph
Adhered with RapidLock	TP0	FleeceBACK RL TPO	115-mil	15 YR	55 mph

Note: Refer to Carlisle's Traditional Roof Garden Specification and Details for required design information for various warranty durations.



Modular Roof Garden Systems

Warranty Availability

Membrane Attachment Method	Membrane Type		Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed
		Sure-Seal (Non-Reinforced)	60-mil	20 YR	55 mph
		Sure-Sear (Non-neimorceu)	90-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced)	60-mil	20 YR	55 mph
	LFDIVI	Sure-rough (heimorceu)	75-mil	20 YR	55 mph
		Sure-White	60-mil	20 YR	55 mph
Adhered		Sui e-Willite	90-mil	20 YR	55 mph
Aunereu	TP0	Sure-Weld	60-mil	20 YR	55 mph
	IFU	Suie-Weiu	80-mil	20 YR	55 mph
	PVC	Sure-Flex PVC	60-mil	20 YR	55 mph
	PVG	Sure-Flex PVC	80-mil	20 YR	55 mph
	VEE UD	Sure-Flex KEE HP	60-mil	20 YR	55 mph
	KEE HP		80-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced) SAT	60-mil	20 YR	55 mph
Self Adhered Sheet	TDO	Sure-Weld SAT TP0	60-mil	20 YR	55 mph
	TP0		80-mil	20 YR	55 mph
		Sure-Seal FleeceBACK Sure-White FleeceBACK	115-mil	20 YR	55 mph
	EDDM		145-mil	20 YR	55 mph
	EPDIVI		115-mil	20 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TP0	Sure-Weld FleeceBACK	115-mil	20 YR	55 mph
Flexible FAST	IPU		145-mil	20 YR	55 mph
	PVC	Sure-Flex PVC FleeceBACK	115-mil	20 YR	55 mph
	PVG		135-mil	20 YR	55 mph
	VEE LID	Cura Flav VEF IID FlaggeDACV	115-mil	20 YR	55 mph
	KEE HP	Sure-Flex KEE HP FleeceBACK	135-mil	20 YR	55 mph
	EPDM	Sure-Seal FleeceBACK AFX	105-mil	20 YR	55 mph
Adhered with Asphalt	TP0	Sure-Weld FleeceBACK AFX	135-mil	20 YR	55 mph
	170	Sufe-Weiu Fieecedaun AFX	155-mil	20 YR	55 mph
Adhered with RapidLock	EPDM	FleeceBACK RL EPDM	115-mil	20 YR	55 mph
Aunereu with Napiulock	TP0	FleeceBACK RL TPO	115-mil	20 YR	55 mph

Note: Refer to Carlisle's Modular Roof Garden Specification and Details for required design information for various warranty durations.



Paver Systems Warranty Availability

Membrane Attachment Method	Membrane Type		Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed
		Sure-Seal	60-mil	20 YR	55 mph
		(Non-Reinforced)	90-mil	20 YR	55 mph
	EPDM	Cura Tough (Dainforced)	60-mil	20 YR	55 mph
	EPDIVI	Sure-Tough (Reinforced)	75-mil	20 YR	55 mph
		Sure-White	60-mil	20 YR	55 mph
Adhered		Sure-write	90-mil	20 YR	55 mph
Adriered	TP0	Sure-Weld	60-mil	20 YR	55 mph
	IPU	Sure-weid	80-mil	20 YR	55 mph
	PVC	Sure-Flex PVC	60-mil	20 YR	55 mph
	PVC	Suie-Flex PVC	80-mil	20 YR	55 mph
	KEE HP	Sure-Flex KEE HP	60-mil	20 YR	55 mph
	NEE HP		80-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced) SAT	60-mil	20 YR	55 mph
Self Adhered Sheet	TDO	Sure-Weld SAT TPO	60-mil	20 YR	55 mph
	TP0		80-mil	20 YR	55 mph
		Sure-Seal FleeceBACK EPDM Sure-White FleeceBACK	115-mil	20 YR	55 mph
	EDDM		145-mil	20 YR	55 mph
	EPDIVI		115-mil	20 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TP0	Sure-Weld FleeceBACK	115-mil	20 YR	55 mph
Flexible FAST	IPU	Sure-weid FleecedACK	145-mil	20 YR	55 mph
	PVC	/C Sure-Flex PVC FleeceBACK	115-mil	20 YR	55 mph
	FVG	Suite-Fiex FVG FieeCedAGK	135-mil	20 YR	55 mph
	KEE HP	Cura Floy VEE UD Flooda PACV	115-mil	20 YR	55 mph
	KEE HF	Sure-Flex KEE HP FleeceBACK	135-mil	20 YR	55 mph
	EPDM	Sure-Seal FleeceBACK AFX	105-mil	20 YR	55 mph
Adhered with Asphalt	TP0	Sure-Weld FleeceBACK AFX	135-mil	20 YR	55 mph
	110	SUIG-WEIU I IEGUEDAUN AFA	155-mil	20 YR	55 mph
Adhered with RapidLock	EPDM	FleeceBACK RL EPDM	115-mil	20 YR	55 mph
AUTOTOU WITH NAPIULUUK	TP0	FleeceBACK RL TPO	115-mil	20 YR	55 mph

Note: Refer to Carlisle's Modular Roof Garden Specification and Details for required design information for various warranty durations.