

#### **EPDM** 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 Holmorood)	90-mil	30 YR	120 mph	2 inch	32 hrs
Adhered		45-mil	15 YR	90 mph	N/A	8 hrs
Aunereu	Sure-Tough (Reinforced)	60-mil	20 YR	120 mph	1 inch	16 hrs
	(nonnoroda)	75-mil	30 YR	120 mph	2 inch	32 hrs
	Sure-White	60-mil	25 YR	120 mph	1 inch	N/A
	Sule-wille	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 Texible FAST		145-mil	30 YR	120 mph	3 inch	32 hrs
	FleeceBACK EPDM	115-mil	25 YR	120 mph	2 inch	16 hrs
	(Sure-White)	145-mil	30 YR	120 mph	3 inch	32 hrs
	FleeceBACK AFX EPDM (Sure-Seal)	90-mil	20 YR	90 mph	1 inch	8 hrs
Adhered with Asphalt		105-mil	25 YR	90 mph	2 inch	16 hrs
	FleeceBACK AFX EPDM (Sure-White)	105-mil	25 YR	90 mph	2 inch	16 hrs
Adhered with RapidLock	FleeceBACK RL EPDM	115-mil	20 YR	90 mph	2 inch	16 hrs
		45-mil	20 YR	80 mph	1 inch	N/A
Ballasted	Sure-Seal (Non-Reinforced)	60-mil	25 YR	80 mph	2 inch	N/A
	()	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
		75-mil	30 YR	90 mph	N/A	32 hrs
lechanically		100-mil	15 YR	72 mph	N/A	8 hrs
astened	FleeceBACK EPDM (Sure-Seal)	115-mil	15 YR	72 mph	N/A	16 hrs
	()	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").



#### **TPO** 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
Calf Adharad Chaot	Cure Wold CAT TDO	60-mil	20 YR	100 mph	1 inch	N/A
Self Adhered Sheet	Sure-Weld SAT TPO	80-mil	30 YR	100 mph	2 inch	16 hrs
		100-mil	15 YR	120 mph	1 inch	8 hrs
	FleeceBACK TPO (Sure-Weld)	115-mil	25 YR	120 mph	2 inch	16 hrs
Adhered with		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
		120-mil	15 YR	90 mph	1 inch	N/A
Adhered with Asphalt	FleeceBACK AFX (Sure-Weld)	135-mil	20 YR	90 mph	2 inch	16 hrs
	(oure weid)	155-mil	25 YR	90 mph	2 inch	32 hrs
Adhered with RapidLock	FleeceBACK RL TPO (Sure-Weld)	115-mil	20 YR	90 mph	2 inch	16 hrs
		45-mil	15 YR	90 mph	N/A	N/A
	Sure-Weld	60-mil	20 YR	90 mph	N/A	N/A
Vechanically		80-mil	30 YR	90 mph	N/A	16 hrs
Fastened	FleeceBACK FR TPO (Sure-Weld Fire Rated)	115-mil	15 YR	72 mph	N/A	16 hrs
		45-mil	15 YR	90 mph	N/A	N/A
nduction 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").



#### **PVC** 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
A alla a una 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
Flexible 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
	(oure rick)	135-mil	30 YR	120 mph	3 inch	32 hrs
Adhered with RapidLock	FleeceBACK RL PVC (Sure-Flex)	115-mil	20 YR	90 mph	2 inch	16 hrs
	Sure-Flex PVC	50-mil	15 YR	90 mph	N/A	N/A
		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
Vechanically	(ouro riok)	135-mil	15 YR	72 mph	N/A	32 hrs
Fastened		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	115-mil	15 YR	72 mph	N/A	16 hrs
	(Sure-Flex)	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").



## **Traditional Roof Garden Systems** Extensive / Shallow Systems Warranty Availability

Membrane Attachment Method	Membrane Type		Minimum Membrane Thickness	Maximum Warranty Duration	Maximum Warranty Wind Speed
		Cure Cool (Non Deinforged)	60-mil	15 YR	55 mph
		Sure-Seal (Non-Reinforced)	90-mil	20 YR	55 mph
	EPDM		60-mil	15 YR	55 mph
	EFDIVI	Sure-Tough (Reinforced)	75-mil	20 YR	55 mph
		Sure-White	60-mil	15 YR	55 mph
Adhered		Sule-wille	90-mil	20 YR	55 mph
Aunereu	TPO	Sure-Weld	60-mil	15 YR	55 mph
	IFU	Sule-weiu	80-mil	20 YR	55 mph
	PVC	Sure-Flex PVC	60-mil	15 YR	55 mph
	FVG	Sule-Flex FVG	80-mil	20 YR	55 mph
	KEE HP	Sure-Flex KEE HP	60-mil	15 YR	55 mph
	NEE NF		80-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced) SAT	60-mil	15 YR	55 mph
Self Adhered Sheet	750	Sure-Weld SAT TPO	60-mil	15 YR	55 mph
	TPO		80-mil	20 YR	55 mph
			115-mil	15 YR	55 mph
	50014	Sure-Seal FleeceBACK	145-mil	20 YR	55 mph
	EPDM	Sure-White FleeceBACK	115-mil	15 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TDO		115-mil	15 YR	55 mph
Flexible FAST	TPO	Sure-Weld FleeceBACK	145-mil	20 YR	55 mph
	DVC		115-mil	15 YR	55 mph
	PVC	Sure-Flex PVC FleeceBACK	135-mil	20 YR	55 mph
	KEE HP		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	TDO	Sura Wold ElegenDACK AFY	135-mil	15 YR	55 mph
	TPO	Sure-Weld FleeceBACK AFX	155-mil	20 YR	55 mph
Adhorod with Denidl cold	EPDM	FleeceBACK RL EPDM	115-mil	15 YR	55 mph
Adhered with RapidLock	TPO	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** Semi-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
Adhavad		Sure-White	90-mil	20 YR	55 mph
Adhered	TPO	Sure-Weld TPO	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	TDO	Sure-Weld FleeceBACK	115-mil	15 YR	55 mph
Flexible FAST	TPO		135-mil	20 YR	55 mph
	PVC	Sure-Flex PVC FleeceBACK	115-mil	15 YR	55 mph
	PVG	SUIE-FIEX PVC FIEECEDACK	135-mil	20 YR	55 mph
			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	TPO		135-mil	15 YR	55 mph
	IPU	Sure-Weld FleeceBACK AFX	155-mil	20 YR	55 mph
Adhorod with DopidLook	EPDM	FleeceBACK RL EPDM	115-mil	15 YR	55 mph
Adhered with RapidLock	TPO	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
	EPDINI	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	TPO	Sure-Weld FleeceBACK	115-mil	15 YR	55 mph
Flexible FAST			135-mil	20 YR	55 mph
	DIVO		115-mil	15 YR	55 mph
	PVC	Sure-Flex PVC FleeceBACK	135-mil	20 YR	55 mph
			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	15 YR	55 mph
Adhered with Asphalt	TPO	Sure-Weld FleeceBACK TPO	135-mil	15 YR	55 mph
	EPDM	FleeceBACK RL EPDM	115-mil	15 YR	55 mph
Adhered with RapidLock	TPO	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
		Quer Ocal (New Deinferred)	60-mil	20 YR	55 mph
		Sure-Seal (Non-Reinforced)	90-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced)	60-mil	20 YR	55 mph
	EPDIVI	Sure-Tough (Reinforcea)	75-mil	20 YR	55 mph
		Sure-White	60-mil	20 YR	55 mph
Adhered		Sure-writte	90-mil	20 YR	55 mph
Aunereu	TPO	Sure-Weld	60-mil	20 YR	55 mph
	IPU	Sure-weid	80-mil	20 YR	55 mph
	DVO		60-mil	20 YR	55 mph
	PVC	Sure-Flex PVC	80-mil	20 YR	55 mph
		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 TPO	60-mil	20 YR	55 mph
	TPO		80-mil	20 YR	55 mph
		Sure-Seal FleeceBACK EPDM Sure-White FleeceBACK	115-mil	20 YR	55 mph
	FDDM		145-mil	20 YR	55 mph
	EPDIVI		115-mil	20 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TDO		115-mil	20 YR	55 mph
Flexible FAST	TPO	Sure-Weld FleeceBACK	145-mil	20 YR	55 mph
	PVC		115-mil	20 YR	55 mph
	PVG	Sure-Flex PVC FleeceBACK	135-mil	20 YR	55 mph
	KEE HP		115-mil	20 YR	55 mph
	NEE 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	TDO	Cure Wold Flaces DAOK AFY	135-mil	20 YR	55 mph
	TPO	Sure-Weld FleeceBACK AFX	155-mil	20 YR	55 mph
Adhorod with Donidl cold	EPDM	FleeceBACK RL EPDM	115-mil	20 YR	55 mph
Adhered with RapidLock	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	Sure-Tough (Reinforced)	60-mil	20 YR	55 mph
	EPDIM		75-mil	20 YR	55 mph
		Sure-White	60-mil	20 YR	55 mph
Adhered		Sule-Wille	90-mil	20 YR	55 mph
Aunereu	TPO	Sure-Weld	60-mil	20 YR	55 mph
	IFU	Sule-Welu	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
	KEE HP	Sure-Flex KEE HP	60-mil	20 YR	55 mph
	NEE NF		80-mil	20 YR	55 mph
	EPDM	Sure-Tough (Reinforced) SAT	60-mil	20 YR	55 mph
Self Adhered Sheet	75.0	Sure-Weld SAT TPO	60-mil	20 YR	55 mph
	TPO		80-mil	20 YR	55 mph
			115-mil	20 YR	55 mph
	FDDM	Sure-Seal FleeceBACK	145-mil	20 YR	55 mph
	EPDM	Sure-White FleeceBACK	115-mil	20 YR	55 mph
			145-mil	20 YR	55 mph
Adhered with	TDO	PO Sure-Weld FleeceBACK	115-mil	20 YR	55 mph
Flexible FAST	IPU		145-mil	20 YR	55 mph
	DVC	PVC Sure-Flex PVC FleeceBACK	115-mil	20 YR	55 mph
	PVG		135-mil	20 YR	55 mph
	KEE HP	Sure-Flex KEE HP FleeceBACK	115-mil	20 YR	55 mph
			135-mil	20 YR	55 mph
	EPDM	Sure-Seal FleeceBACK AFX	105-mil	20 YR	55 mph
Adhered with Asphalt	TPO	Sure-Weld FleeceBACK AFX	135-mil	20 YR	55 mph
	IFU		155-mil	20 YR	55 mph
Adhered with RapidLock	EPDM	FleeceBACK RL EPDM	115-mil	20 YR	55 mph
AUTOLOU WILL NAPIULUUK	TPO	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.