

**FM Global Approvals – Carlisle TPO Membrane Systems – Fully Adhered**

Deck	Rating	Slope in/ft.	Insulation	Cover Board	Insulation Fastener and Plate	Fastener Frequency	Membrane	Membrane Attachment	RoofNAV
Steel Deck Min. 22 Gauge Grade E 80 ksi	1A-225	½"	SS (2" min)	-	ST	1 per 1 sq. ft.	SW	SB	245513-0-0
	1A-255	1.5"	H	SR	ST	1 per 1 sq. ft.	SW	LVOC	239271-0-0
Steel deck Min. 22 Gauge Grade C 33 ksi	1A-150	½"	H (2" min)	-	ST	1 per 1.6 sq. ft.	SW	SB	135476-0-0
	1A-150	1.5"	H	SR	ST	1 per 1.6 sq. ft.	SW	LVOC	269993-0-0
	1A-150	1.5"	H	OSB	ST	1 per 1.9 sq. ft.	SW	SB	13335-0-0
	1A-90	½"	H (2" min)	-	ST	1 per 4 sq. ft.	SW	SB/LVOC	13222-0-0
	1A-90	½"	H (1.5" min)	-	ST	1 per 2 sq. ft.	SW	SB/LVOC	13221-0-0
	1A-90	½"	H	HD+	ST	1 per 2 sq. ft.	SW	LVOC	295762-0-0
	1A-90	1.5"	H	WF	ST	1 per 2 sq. ft.	SW	SB	212437-0-0
	1A-90	1.5"	H	SR	ST	1 per 3.2 sq. ft.	SW	SB/LVOC	269985-0-0
	1A-90	1.5"	H	DDP	OMG	1 per 2.7 sq. ft.	SW	SB/LVOC	92102-0-0

**Insulation**

H = Polyiso HP-H  
SS = SecurShield™

**Coverboard**

HD = SecurShield HD  
HD+ = SecurShield HD Plus  
SR = SECUROCK®  
DDP = DensDeck® Prime  
WF = Wood Fiberboard  
OSB = Oriented Strand Board

**Fastener and Plate**

ST = Sure-Seal® Insulation Plate (Steel)  
OMG = Olympic sourced fasteners/plates

**Membrane**

SW = Sure-Weld (.045" & .060"), Sure-Weld Xtra (.080") and Sure-Weld HS

**Membrane Attachment**

SB = Sure-Weld Bonding Adhesive  
LVOC = Low-VOC Bonding Adhesive

For additional information on Carlisle Sure-Weld TPO FM code approvals and details on other assemblies, please see the Sure-Weld TPO Code Approval Guide at [www.carlisesyntec.com](http://www.carlisesyntec.com).

## FM Global Approvals – Carlisle TPO Membrane Systems – Mechanically Attached

Deck	Rating	Slope in/ft.	Insulation	Cover Board	Maximum Sheet Width	Fastener/Plate	Fastener Spacing	Gauge/Deck Grade	RoofNAV
Steel Deck	1A-135	½"	H	-	8'	HPX/PIR	6"	22-gauge/Grade E	12496-0-0
	1A-135	3"	H	SR/DD	8'	HPX/PIR	6"	22-gauge/Grade E	12511-0-0
	1A-135	1.5"	H	WF	8'	HPX/PIR	6"	22-gauge/Grade E	13532-0-0
	1A-90	½"	H	-	12'	HPXT/PIRXT	12"	22-gauge/Grade E	143000-0-0
	1A-90	3"	H	SR/DD	12'	HPXT/PIRXT	12"	22-gauge/Grade E	142999-0-0
	1A-90	½"	H	WF	12'	HPXT/PIRXT	12"	22-gauge/Grade E	12788-0-0
	1A-90	3"	H	-	12'	HPXT/PIRXT	12"	22-gauge/Grade E	12792-0-0
	1A-90	1.5"	H	SR/DD	12'	HPXT/PIRXT	12"	22-gauge/Grade E	13741-0-0
	1A-60	½"	H	WF	12'	HPX/PIR	12"	22-gauge/Grade E	140548-0-0
	1A-60	3"	H	-	12'	HPX/PIR	12"	22-gauge/Grade E	140546-0-0
	1A-60	1.5"	H	SR/DD	12'	HPX/PIR	12"	22-gauge/Grade E	140537-0-0

### Insulation

H = Polyiso HP-H

### Fastener and Plate

HPX = HP-X Fastener™

HPXT = HP-Xtra Fastener

PIR = Piranha Plate™

PIRXT = Piranha Xtra Plate

### Coverboard

HD = SecurShield HD

SR = SECUROCK

DD = DensDeck

WF = Wood Fiberboard

### Membrane

SW = Sure-Weld (.045" & .060"), Sure-Weld Xtra (.080")

For additional information on Carlisle Sure-Weld TPO FM code approvals and details on other assemblies, please see the Sure-Weld TPO Code Approval Guide at [www.carlisesyntec.com](http://www.carlisesyntec.com).