

Membrane + Insulation Attachment

Insulation Adhesives | Pull Tests

ACCEPTABLE INSULATION ADHESIVE SUBSTRATES

Substrate	ISO Stick			ISO Twin Pack			ISO Spray			ISO Fix		
	Acceptable	Pull Test Required	Not Acceptable	Acceptable	Pull Test Required	Not Acceptable	Acceptable	Pull Test Required	Not Acceptable	Acceptable	Pull Test Required	Not Acceptable
Structural Deck	Steel*	X			X			X			X	
	New Structural Concrete**	X			X			X			X	
	Existing Structural Concrete		X			X		X				X
	Plywood, OSB, Wood Planking	X			X			X			X	
	Cementitious Wood Fiber		X		X			X			X	
	Poured Gypsum		X			X		X				X
	Lightweight Insulating Concrete Decks***	X				X		X				X
Membranes	V-Force	X			X			X				X
	Existing Asphalt		X			X		X				X
	Existing Granule Surfaced Mod Bit		X			X		X				X
	Existing Smooth Surfaced Mod Bit		X			X		X				X
	Coal Tar Pitch		X			X			X			X
	Existing Single Ply Membranes			X		X			X			X
Insulation Cover/Barrier Boards	ISO 95+ GL, Resista, ISO GARD HD	X			X			X			X	
	FiberTop, StructoDeck	X			X			X			X	
	DensDeck, DensDeck Prime	X			X			X			X	
	Expanded / Extruded Polystyrene		X			X			X			X
	Woodfiber (non-Firestone)		X			X			X			X
	Fiberglass Insulation			X		X			X			X
	Perlite Insulation			X		X			X			X

* New steel decks may require cleaning to remove process oils.

** New poured decks must have a minimum 28 day cure time.

*** Acceptable Lightweight concrete includes cellular or air-entrained concrete. Lightweight concrete with aggregate (such as perlite or vermiculite) is not acceptable

TABLE 1.04-1

THE MINIMUM FASTENER PULLOUT RESISTANCES FOR SPECIFIC SYSTEMS

System	Minimum Fastener Pullout
Fully Adhered systems with Insulation Mechanically Attached to Deck	300 lb (136.1 KG)
Single-Ply mechanically attached.	400 lb (181.4 Kg)
Base Sheet Mechanically Attached to Deck	300 lb (136.1 Kg)
Base Sheet Nailed to Deck (Cap nail or LWC Fastener)	40 lb (18.1 Kg)
Contact the Quality Building Services Technical Department at Firestone Building Products when the structural deck does not meet the minimum fastener pullout requirements.	

Table 1.04-1 FSBP EPDM Single-Ply Design Guide, September 2014

TABLE 1.04 –2

RECOMMENDED NUMBER OF PULL OUT TESTS

ROOF SIZE	Number of Pull-Out Tests
Less Than 10,000 sf	Less Than 1,000 m ²
10,000 sf - 50,000 sf	1,000 m ² – 5,000 m ²
50,000 sf - 100,000 sf	5,000 m ² – 10,000 m ²
Over 100,000 sf	10,000 m ²
	1 per 5,000 sf./ 500 m ²

Table 1.04-2 FSBP EPDM Single-Ply Design Guide, September 2014

