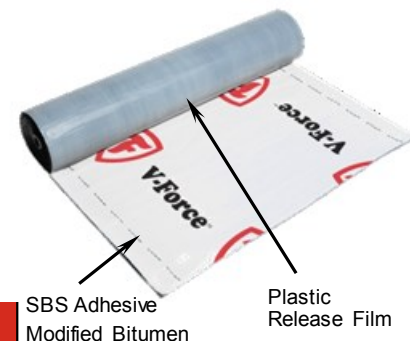


# TECHNICAL INFORMATION SHEET

## V-Force™ Vapor Barrier Membrane

**Item Description**  
1 Roll (5 squares)

**Item Number**  
W56358900V



Meets or exceeds performance requirements of ASTM E 2178 and D 1970

### Product Information

#### Description:

Firestone V-Force Vapor Barrier Membrane is a vapor barrier comprised of SBS modified bitumen adhesive, factory-laminated to a tri-laminate woven, high-density polyethylene top surface. A polymeric release liner protects the adhesive. V-Force membrane is intended for use as a vapor retarder in Firestone roofing systems and may be used as a temporary roof membrane for up to ninety (90) days.

### Product Packaging

Roll Width:	3' 9" (1.14 m)	Boxed Rolls per Pallet:	16
Roll Length:	133' 9" (40.8 m)	Weight Per Pallet:	1,372 lb (622 kg)
Net Coverage:	468 ft <sup>2</sup> (43.5 m <sup>2</sup> )	Pallet Size:	48" x 39" (1.2 m x 1 m)
Roll Weight:	82 lb (37 kg)	Coverage per Pallet:	7,488 ft <sup>2</sup> (696 m <sup>2</sup> )

#### Method of Application:

1. V-Force membrane can be applied at ambient temperatures as low as 25 °F (-4 °C) if it has been stored in a heated area so that it will be between 50 °F (10 °C) and 100 °F (38 °C) at the time of application.
2. All substrates except metal decks must be primed with either Firestone SA Water Based Primer (W563587091) or Firestone SA Solvent Based Primer (W563587090).
3. V-Force membrane must be installed with minimum 3" (76.2 mm) side laps and 6" (152.4 mm) end laps.
4. V-Force membrane should be rolled in with a 75 lb (34 kg) roller to fully mate each roll to substrate, including all lap areas.

#### Acceptable Immediate Substrates for Self-Adhered Application:

**NOTE:** All substrates except metal decks must be primed with either Firestone SA Water Based Primer (W563587091) or Firestone SA Solvent Based Primer (W563587090).

- Structural Concrete (must be clean, dry, and properly cured)
- Steel Deck  
**NOTE:** Factory Mutual (FM) does not recognize direct to steel deck attachment of this product.
- Plywood or OSB
- Existing Smooth Surface BUR or APP Modified Bitumen (must be clean and smooth)
- DensDeck® Prime, SECUROCK® Gypsum Fiber, STRUCTODEK® HD.
- Firestone ISOGARD™ HD Composite or Cover Board, RESISTA™ Insulation

**NOTE:** Please consult the SBS Design Guide and QuickSpecs online at [www.firestonebpc.com](http://www.firestonebpc.com) to review specific information regarding the type of deck and insulation in use.

## V-Force™ Vapor Barrier Membrane

### Acceptable Adhesion to V-Force Vapor Barrier Membrane:

**NOTE:** The only approved application for adhering directly to V-Force Vapor Barrier Membrane is insulation attachment. Do not adhere any roofing membrane directly to V-Force Vapor Barrier Membrane.

- I.S.O. Spray™ R Adhesive
- I.S.O. Twin Pack™ Adhesive
- I.S.O. Stick Insulation™ Adhesive
- Hot asphalt

**NOTE:** Please consult the SBS Design Guide and QuickSpecs online at [www.firestonebpco.com](http://www.firestonebpco.com) to review specific information regarding the type of deck and insulation in use.

### Storage:

- All material should be stored out of the weather in a clean, dry area in its original unopened packaging at a minimum of 50 °F (10 °C) and a maximum of 140 °F (60 °C) so that it will be 50 °F (10 °C) or above at the time of application.
- Do not stack V-Force Vapor Barrier membrane more than two (2) pallets high.
- If the material must be stored temporarily on the roof before application, it must be elevated from the roof surface on a pallet, stored on end, and covered from the weather with a light colored opaque tarp in a neat, safe manner that does not exceed the allowable load limit of the storage area.

### Shelf Life:

Shelf life of one year (12 months) can be expected when kept dry and stored in the original, unopened packaging between 60 °F and 80 °F (16 °C and 27 °C)

### Precautions:

- For safety information, refer to the Safety Data Sheet (SDS) for SBS Membranes and Flashing.
- Do not apply V-Force Vapor Barrier Membrane directly to Lightweight Insulating Concrete.
- Do not use I.S.O. Fix™ II to adhere insulation directly to V-Force Vapor Barrier Membrane.
- Take care when transporting and handling Firestone Modified Bitumen rolls to avoid punctures and other types of physical damage.
- Isolate waste products, petroleum products, grease, oil (mineral and vegetable) and animal fats from all Firestone Modified Bitumen membranes.

### LEED® Information:

Post Consumer Recycled Content: 0%  
Post Industrial Recycled Content: 0%  
Manufacturing Location: Québec, Canada

\*NOTE: LEED® is a registered trademark of the U.S. Green Building Council.



## V-Force™ Vapor Barrier Membrane

### Typical Properties (Meets ASTM E 2178 and D 1970)

<u>Property</u>	<u>Test Method</u>	<u>Firestone Typical Performance</u>
Thickness:	D 5147	30 mils (0.762 mm)
Tensile Strength:	D 5147	64 lbf/in (11.2 kN/m), MD
		88 lbf/in (15.4 kN/m), XMD
Ultimate Elongation, Bitumen Portion, at 73 °F (23 °C):	D 5147	52%, MD
		24%, XMD
Low Temperature Flexibility (Cold Bending):	D 5147	-31 °F (-35 °C)
Static Puncture:	D 5602	90 lbf (400 N)
Tear Strength at 73 °F (23 °C):	D 5601	84 lbf, MD (374 N)
		90 lbf, XMD (400 N)
Lap Adhesion at 73 °F (23 °C):	D 1876	6 lbf/in (1.05 kN/m)
Water Absorption, % by Weight:	D 5147, D 95	<0.1 %
Peel Resistance:	D 903	8 lbf/in (1.4 kN/m)
Water Vapor Permeance, Max.:	E 96 Procedure B	0.017 perms (0.92 Ng/Pa•s•m <sup>2</sup> )
Air Permeability:	D 1970	0.00114 ft <sup>3</sup> /min•ft <sup>2</sup> (0.007 L/sec•m <sup>2</sup> )
	E 2178	<0.0002 ft <sup>3</sup> /min•ft <sup>2</sup> (<0.0011 L/sec•m <sup>2</sup> )

Please contact Quality Building Services Technical Department at 1-800-428-4511 for further information.

*This sheet is meant to highlight Firestone products and specifications and is subject to change without notice. Firestone takes responsibility for furnishing quality materials which meet published Firestone product specifications. Neither Firestone nor its representatives practice architecture. Firestone offers no opinion on and expressly disclaims any responsibility for the soundness of any structure. Firestone accepts no liability for structural failure or resultant damages. Consult a competent structural engineer prior to installation if the structural soundness or structural ability to properly support a planned installation is in question. No Firestone representative is authorized to vary this disclaimer.*