

# Threshold VIP Vacuum Insulation Panel

“The Next Step” in the advancement of vacuum insulation.



- Premium performance rigid insulation – thermal conductivities as low as 2.88 mW/mK
- High level of thermal efficiency with minimal thickness
- Ideal for cold chain shipping solutions
- Automotive, marine, recreation vehicle, cryogenic, electronics, military, consumer goods, and aerospace applications

# Threshold VIP Vacuum Insulation Panel

Threshold is “The Next Step” in the advancement of vacuum insulation. It provides exceptionally high R value at moderate vacuum levels which results in increased energy savings, increased usable volume, and very long panel life. It also has exceptional dimensional stability and control for tight fitting panel joints. Threshold comes in virtually any thickness so you can design for the exact thermal resistance that you need. It is the result of over 20 years of experience in developing high performance insulations. You will find you are at the Threshold of a whole new opportunity for thermal product design.

## Key Applications:

- Scientific freezers
- Refrigerated trucks and rail cars
- Cryogenic applications
- Insulated shipping containers
- Medical applications
- Consumer refrigerators and freezers
- Marine and RV refrigeration
- Cold storage units

Physical Properties <sup>1</sup>	Test Method	English Units	Metric Units
Maximum Dimensions		39" W x 50" L x 2.0" thick	991mm W x 1270mm L x 51mm thick
Dimensional Tolerances		+/- 0.12" L&W, +/- 0.06" thickness	+/- 3mm L&W, +/-1.5mm thickness
Thickness Increments		0.065" increments	1.65mm increments
Density (Nominal)	ASTM D 1622-93	16 lb/ft <sup>3</sup>	256 kg/m <sup>3</sup>
Thermal Conductivity (Initial) at 75°F Mean Temperature	ASTM C1667-15	0.020 BTU-in/ft <sup>2</sup> -hr-F	2.88 mW/m-K
Compression Upon Evacuation	Vertical direction Horizontal direction	≈ 30% < 0.5%	≈ 30% < 0.5%
Flexural Yield Strength at 10% strain	ASTM C203-05 <sup>2</sup>	242 psi	1.67 MPa
Flexural Modulus	ASTM C203-05 <sup>2</sup>	9800 psi	67.6 MPa
Compressive Strength at 10% strain	ASTM C165-07 <sup>3</sup>	8.9 psi	61.4 kPa

<sup>1</sup> Typical properties, not specification values

<sup>2</sup> Test method 1

<sup>3</sup> 6"x6"x1" sample size



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