

PRELIMINARY PRODUCT DATA SHEET



LEADER IN THERMAL MANAGEMENT: DESIGN, INNOVATION AND MATERIALS

V-THERM™ Highly Thermally Conductive Elastomer

DESCRIPTION

V-THERM thermally conductive elastomer interface pads are designed for use between heat generating components and cooling devices. This material conforms to surface irregularities under moderate application pressures to fill air gaps between components and their heat sinks. With thermal conductivity greater than 5 W/m-K, V-THERM elastomer minimizes thermal impedance between the electronic device and its heat dissipator.

Consisting of a boron nitride-filled silicone, V-THERM pads are Chomerics' most thermally conductive interface product. They are recommended for applications where conformability and extremely high thermal conductivity are needed, such as high-end notebook PCs and heat pipe assemblies. V-THERM pads are best suited for applications where gaps of approximately 0.020 to 0.100 inch (0.51 to 2.54mm) need to be filled.

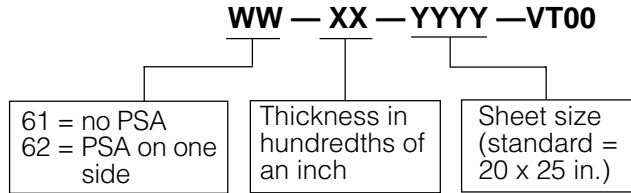
Electrically non-conductive, V-THERM material has a dielectric strength of 150 Vac/mil, and a volume resistivity of 10^{14} ohm-cm. However, because of the possibility of cut-through, V-THERM pads should only be considered as a high voltage insulator after careful evaluation and testing. V-THERM elastomer material is non-nutritive and does not promote fungal growth.

continued

TYPICAL PROPERTIES		V-THERM			TEST METHOD
CONSTRUCTION	Binder	Silicone			—
	Filler	Boron Nitride			—
	Carrier	None			—
	Color	Blue			Visual
	Thickness, inch (mm)	0.020 (0.51)	0.040 (1.02)	0.060 (1.52)	ASTM D374
THERMAL	Thermal Impedance, °C-in ² /W @ 5 psi	0.27	0.47	0.70	ASTM D5470
	@ 10 psi	0.24	0.42	0.56	
	@ 20 psi	0.23	0.40	0.46	
	@ 50 psi	0.19	0.30	0.38	
@ 100 psi	0.16	0.27	0.34		
	Thermal Conductivity, W/m-K	5.0	6.0	7.0	ASTM D5470
	Operating Temperature Range, °C	- 60 to +150			—
ELECTRICAL	Dielectric Strength, Vac/mil	150			ASTM D149
	Volume Resistivity, ohm-cm	4×10^{14}			ASTM D257
	Dielectric Constant @ 100 Hz	3.3			ASTM D150
	@ 100 kHz	2.9			
	Dissipation Factor @ 100 Hz	0.023			ASTM D150
@ 100 kHz	0.0013				
MECHANICAL	Hardness (Shore A)	25			ASTM D2240
	Specific Gravity	1.35			ASTM D792
	Compression Set, % (22 hr. @ 125 °C)	80			ASTM D395

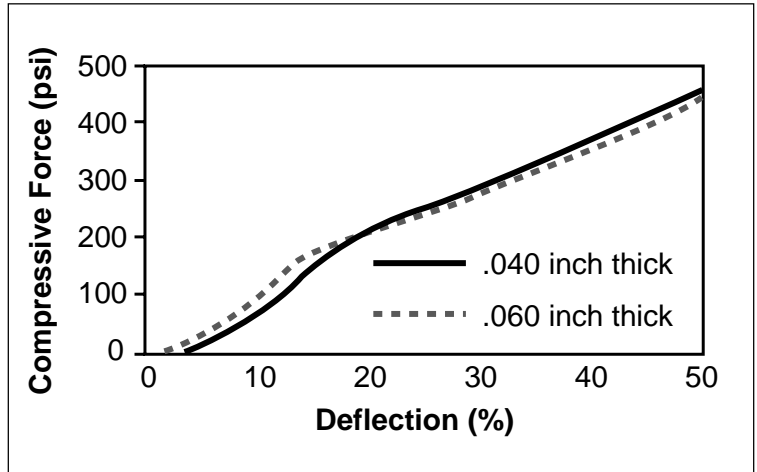
ORDERING INFORMATION

Standard sheet thickness are 0.020 in. (0.51 mm), 0.040 in. (1.02 mm) and 0.060 in. (1.52 mm). Standard sheet size is 20 x 25 inches (50.8 x 63.5 cm). As an assembly aid, V-THERM material can be supplied with a pressure-sensitive adhesive backing. Custom thicknesses are also available. Use the following part number to order this product.



Example: 62-04-2025-VT00 is a 0.040 inch thick, 20 x 25 inch sheet with PSA backing.

Typical Compression/Deflection Characteristics



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