

Max-Therm Thermal Interface material - Putty Pad

PP5000 series

General Usage:

Putty-Pad PP5000 Series is the best material for applications where large tolerance differences create the need for compression of interface material beyond 50% of its original thickness. Putty-Pad PP5000 flows to ensure low pressures on the components being cooled. In conjunction with outstanding compression characteristics, Putty Pad PP5000 has a high thermal conductivity that results in very low thermal resistance. Putty-Pad PP5000 is naturally tacky and requires no further adhesive coating, which would inhibit thermal performance. Putty-Pad PP5000 has a hardness of 8 (Shore OO), is electrically insulating, and is stable from -45°C to 200°C.

Benefit:

- Soft and ultra high compressibility for low stress applications
- 3.2 W/mK thermal conductivity
- Available in sheets form from 0.5 to 6.0mm thickness
- Naturally sticky, no additional adhesion coating

Typical Applications:

- Cooling multiple components to the chassis or frame
- Entire large panel printed circuit board cooling
- Semiconductor automated test equipment
- Any high compression low stress applications

Typical Properties:

PP5000 series	Test method	PP5050	PP5075	PP5100	PP5150	PP5200
Construction & Composition		Ceramic powder silicone elastomer				
Color		Green				
Thickness (mm)		0.5	0.75	1	1.5	2
Carrier		Glass Fabric				
Thickness Tolerance (mm)		±10%	±10%	±10%	±10%	±10%
Density (g/cc)		2.96				
Hardness (Shore OO)	ASTM D 2240	8				
UL Rating		94V0				
Continuous Use Temp (°C)	TGA+DMA	-40~200				
Thermal Conductivity (W/mk)	ASTM 5470/E 1530	3.2				
Thermal Impedance @10psi (°C-in²/W)		0.44	0.46	0.49	0.53	0.58
@69KPa(°C-cm²/W)		2.82	2.95	3.14	3.40	3.72
Thermal Expansion (ppm/C)		50.6				
Dielectric Strength (Volts)		>3,000	>3,000	>4,000	>4,000	>6,000
Volume Resistivity (ohm-cm)	ASTM D 257	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴

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PP5000 series	Test method	PP5250	PP5300	PP5400	PP5450	PP5500
Construction & Composition		Ceramic powder silicone elastomer				
Color		Green				
Thickness (mm)		2.5	3	4	4.5	5
Carrier		Glass Fabric				
Thickness Tolerance (mm)		±10%	±10%	±10%	±10%	±10%
Density (g/cc)		2.96				
Hardness (Shore 00)	ASTM D 2240	8				
UL Rating		94V0				
Continuous Use Temp (°C)	TGA+DMA	-40~200				
Thermal Conductivity (W/mk)	ASTM 5470/E 1530	3.2				
Thermal Impedance @10psi (°C-in²/W)		0.62	N/A	N/A	N/A	N/A
@69KPa(°C-cm²/W)		3.98	N/A	N/A	N/A	N/A
Thermal Expansion (ppm/C)		50.6				
Dielectric Strength (Volts)		>6,000	>6,000	>6,000	>6,000	>6,000
Volume Resistivity (ohm-cm)	ASTM D 257	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴	10 ¹⁴

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