

Max-Therm Thermal Interface material -Thermal Pad

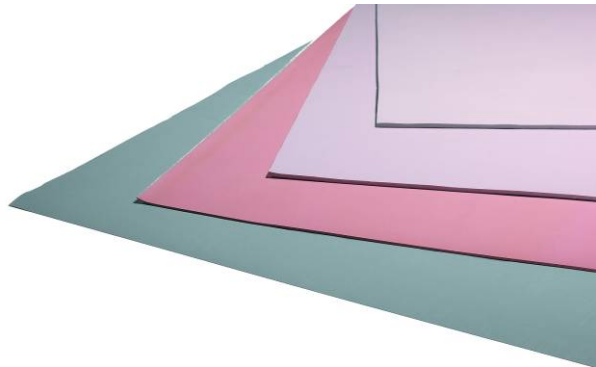
GP5000 series

General Usage:

GP5000 is using the silicone rubber with very good thermal conductivity, it is a enhanced ceramic particles filled silicone rubber, which is a highly conformal and thermally conductive thermal pad. It is used between heat sink and heat generating components. Its ultra soft proper enable filling air voids and rugged surface, and wetting out matting surfaces in order to efficiently transfer heat from components to heat sink.

Benefit:

- Continuous roll package rubber
- General Thermal conductivity
- Ultra soft, highly compressible
- Good wetting
- Self tacky or additional PSA if required



Typical Applications:

- Information products
- BGA
- Power module

Typical Properties:

GP5000 series	Test method	GP5100	GP5150	GP5200	GP5250	GP5300	GP5500
Construction & Composition		Silicone	Silicone	Silicone	Silicone	Silicone	Silicone
Color		Light blue	Light blue	Light blue	Light blue	Light blue	Light blue
Thickness (mm)		1.00mm	1.50mm	2.00mm	2.50mm	3.00mm	5.00mm
Thickness Tolerance (mm)		±10%	±10%	±10%	±10%	±10%	±10%
Density (g/cc)		3.26	3.26	3.26	3.26	3.26	3.26
Hardness (Shore OO)	ASTM D 2240	30 ~ -35	30 ~ 35	30 ~ 35	30 ~ 35	30 ~ 35	30 ~ 35
Tensile Strength	ASTM D 638	46 psi	46 psi	46 psi	46 psi	46 psi	46 psi
Elongation (%)	ASTM D 412	54	54	54	54	54	54
Outgassing TML *Post Cured(%)	ASTM D 150	0.29	0.29	0.29	0.29	0.29	0.29
Outgassing CVCm *Post Cured (%)		0.04	0.04	0.04	0.04	0.04	0.04
UL Rating		94V0	94V0	94V0	94V0	94V0	94V0
Continuous Use Temp (°C)	TGA+DMA	-40 ~ 200	-40 ~ 200	-40 ~ 200	-40 ~ 200	-40 ~ 200	-40 ~ 200
Thermal Conductivity (W/mk)	ASTM 5470/E 1530	3.0	3.0	3.0	3.0	3.0	3.0
Thermal Impedance (°C-in²/W)	@10psi	0.48	0.61	0.75	0.89	1.06	1.93
(°C-cm²/W)	@69KPa	3.21	4.05	4.94	5.85	6.8	11.8
Thermal Expansion (ppm/C)		37.4	37.4	37.4	37.4	37.4	37.4
Dielectric Strength (Volts)		>7,000	>7,000	>7,000	>7,000	>7,000	>7,000
Volume Resistivity (ohm-cm)	ASTM D 257	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³
Dielectric Constant @1MHz	ASTM D 150	NA	NA	NA	NA	NA	NA

Thin series						
GP5000 series	Test method	GP5013	GP5025	GP5030	GP5050	GP5075
Construction & Composition		Silicone	Silicone	Silicone	Silicone	Silicone
Color		Light blue	Light blue	Light blue	Light blue	Light blue
Thickness (mm)		0.13mm	0.25mm	0.3mm	0.50mm	0.75mm
Thickness Tolerance (mm)		±10%	±10%	±10%	±10%	±10%
Density (g/cc)		3.26	3.26	3.26	3.26	3.26
Hardness (Shore OO)	ASTM D 2240	65	65	45	45	45
Tensile Strength	ASTM D 638	46 psi	46 psi	46 psi	46 psi	46 psi
Elongation (%)	ASTM D 412	54	54	54	54	54
Outgassing TML *Post Cured (%)	ASTM D 150	0.29	0.29	0.29	0.29	0.29
Outgassing CVCM *Post Cured (%)		0.04	0.04	0.04	0.04	0.04
UL Rating		94V0	94V0	94V0	94V0	94V0
Continuous Use Temp (°C)	TGA+DMA	-40 ~ 200	-40 ~ 200	-40 ~ 200	-40 ~ 200	-40 ~ 200
Thermal Conductivity (W/mk)	ASTM 5470/E 1530	3.0	3.0	3.0	3.0	3.0
Thermal Impedance @10psi (°C-in²/W)		0.13	0.16	0.34	0.38	0.41
@69KPa(°C-cm²/W)		0.84	1.03	2.18	2.54	3
Thermal Expansion (ppm/C)		37.4	37.4	37.4	37.4	70
Dielectric Strength (Volts)		>4,000	>4,000	>4,000	>4,000	>7,000
Volume Resistivity (ohm-cm)	ASTM D 257	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³
Dielectric Constant @1MHz	ASTM D 150	NA	NA	NA	NA	NA

Thin series with Glass fiber						
GP5000G series	Test method	GP5013G	GP5025G	GP5030G	GP5050G	GP5075G
Construction & Composition		Silicone	Silicone	Silicone	Silicone	Silicone
Color		Light blue	Light blue	Light blue	Light blue	Light blue
Thickness (mm)		0.13mm	0.25mm	0.3mm	0.50mm	0.75mm
Carrier		Glass Fiber	Glass Fiber	Glass Fiber	Glass Fiber	Glass Fiber
Thickness Tolerance (mm)		±10%	±10%	±10%	±10%	±10%
Density (g/cc)		3.26	3.26	3.26	3.26	3.26
Hardness (Shore OO)	ASTM D 2240	65	65	45	45	45
Tensile Strength	ASTM D 638	115 psi	115 psi	46 psi	46 psi	46 psi
Elongation (%)	ASTM D 412	28	28	28	28	28
Outgassing TML *Post Cured (%)	ASTM D 150	0.29	0.29	0.29	0.29	0.29
Outgassing CVCM *Post Cured (%)		0.04	0.04	0.04	0.04	0.04
UL Rating		94V0	94V0	94V0	94V0	94V0
Continuous Use Temp (°C)	TGA+DMA	-40 ~ 200	-40 ~ 200	-40 ~ 200	-40 ~ 200	-40 ~ 200
Thermal Conductivity (W/mk)	ASTM 5470/E 1530	3.0	3.0	3.0	3.0	3.0
Thermal Impedance @10psi (°C-in²/W)		0.16	0.18	0.37	0.42	0.46
@69KPa(°C-cm²/W)		1.03	1.16	2.37	2.76	3.31
Thermal Expansion (ppm/C)		37.4	37.4	37.4	37.4	70
Dielectric Strength (Volts)		>4,000	>4,000	>4,000	>4,000	>7,000
Volume Resistivity (ohm-cm)	ASTM D 257	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³	>10 ¹³
Dielectric Constant @1MHz	ASTM D 150	NA	NA	NA	NA	NA

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