

# Max-Therm Thermal Interface material -Gap Filler Pad

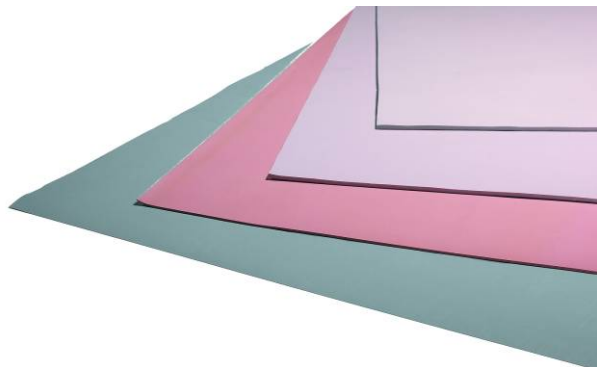
## GP3000 series

### General Usage:

GP3000 is using the silicone rubber with acting advanced thermal conductivity, it is a ceramic particles filled silicone rubber, which is a highly conformal and thermally conductive gap filler 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:

GP3000 series	Test method	GP3100	GP3150	GP-3200	GP3250	GP3300	GP3500
<b>Construction &amp; Composition</b>		Silicone	Silicone	Silicone	Silicone	Silicone	Silicone
<b>Color</b>		Gray	Gray	Gray	Gray	Gray	Gray
<b>Thickness (mm)</b>		1.00mm	1.50mm	2.00mm	2.50mm	3.00mm	5.00mm
<b>Thickness Tolerance (mm)</b>		±0.1mm	±0.1mm	±0.1mm	±0.1mm	±0.1mm	±0.1mm
<b>Density (g/cc)</b>		2.8	2.8	2.8	2.8	2.8	2.8
<b>Hardness (Shore OO)</b>	<b>ASTM D 2240</b>	30-35	30-35	30-35	30-35	30-35	30-35
<b>Tensile Strength</b>	<b>ASTM D 638</b>	66 psi	66 psi	66 psi	66 psi	66 psi	66 psi
<b>Elongation (%)</b>	<b>ASTM D 412</b>	56	56	56	56	56	56
<b>Outgassing TML *Post Cured (%)</b>	<b>ASTM D 150</b>	0.29	0.29	0.29	0.29	0.29	0.29
<b>Outgassing CVCM *Post Cured (%)</b>		0.04	0.04	0.04	0.04	0.04	0.04
<b>UL Rating</b>		94V0	94V0	94V0	94V0	94V0	94V0
<b>Continuous Use Temp (°C)</b>	<b>TGA+DMA</b>	-40~200	-40~200	-40~200	-40~200	-40~200	-40~200
<b>Thermal Conductivity (W/mk)</b>	<b>ASTM 5470/E 1530</b>	2.0	2.0	2.0	2.0	2.0	2.0
<b>Thermal Impedance @10psi (°C-in<sup>2</sup>/W)</b>		1.33	1.73	2.1	2.37	2.56	3.42
<b>@69KPa(°C-cm<sup>2</sup>/W)</b>		8.57	11.16	13.63	15.95	17.33	21.93
<b>Thermal Expansion (ppm/C)</b>		70	70	70	70	70	70
<b>Dielectric Strength (Volts)</b>		>7,000	>7,000	>7,000	>7,000	>7,000-	>7,000-
<b>Volume Resistivity (ohm-cm)</b>	<b>ASTM D 257</b>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>
<b>Dielectric Constant @1MHz</b>	<b>ASTM D 150</b>	6.1	6.1	6.1	6.1	6.1	6.1

Thin series						
GP3000 series	Test method	GP3013	GP3025	GP3030	GP3050	GP3075
Construction & Composition		Silicone	Silicone	Silicone	Silicone	Silicone
Color		Gray	Gray	Gray	Gray	Gray
Thickness (mm)		0.13mm	0.25mm	0.3mm	0.50mm	0.75mm
Thickness Tolerance (mm)		±10% ≤0.013mm	±10% ≤0.025mm	±10% ≤0.03mm	±10% ≤0.05mm	±10% ≤0.075mm
Density (g/cc)		2.8	2.8	2.8	2.8	2.8
Hardness (Shore OO)	ASTM D 2240	65	65	45	45	45
Tensile Strength	ASTM D 638	N/A	66 psi	66 psi	66 psi	66 psi
Elongation (%)	ASTM D 412	N/A	56	56	56	56
Outgassing TML *Post Cured (%)	ASTM D 150	0.29	0.29	0.29	0.29	0.29
Outgassing CVCN *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	2.0	2.0	2.0	2.0	2.0
Thermal Impedance @10psi (°C-in²/W)		0.28	0.42	0.51	0.67	1
@69KPa(°C-cm²/W)		1.78	2.67	3.23	4.33	6.45
Thermal Expansion (ppm/C)		70	70	70	70	70
Dielectric Strength (Volts)		>4,000	>5,000	>5,000	>7,000	>7,000
Volume Resistivity (ohm-cm)	ASTM D 257	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>
Dielectric Constant @1MHz	ASTM D 150	6.1	6.1	6.1	6.1	6.1

Thin series with Glass Fabric						
GP3000 series	Test method	GP3013G	GP3025G	GP3030G	GP3050G	GP3075G
Construction & Composition		Silicone	Silicone	Silicone	Silicone	Silicone
Color		Gray	Gray	Gray	Gray	Gray
Thickness (mm)		0.13mm	0.25mm	0.3mm	0.50mm	0.75mm
Carrier		Glass Fabric	Glass Fabric	Glass Fabric	Glass Fabric	Glass Fabric
Thickness Tolerance (mm)		±10% ≤0.013mm	±10% ≤0.025mm	±10% ≤0.03mm	±10% ≤0.05mm	±10% ≤0.075mm
Density (g/cc)		2.8	2.8	2.8	2.8	2.8
Hardness (Shore OO)	ASTM D 2240	65	65	45	45	45
Tensile Strength	ASTM D 638	N/A	135psi	135psi	135psi	135psi
Elongation (%)	ASTM D 412	N/A	28	28	28	28
Outgassing TML *Post Cured (%)	ASTM D 150	0.29	0.29	0.29	0.29	0.29
Outgassing CVCN *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	2.0	2.0	2.0	2.0	2.0
Thermal Impedance @10psi (°C-in²/W)		0.29	0.43	0.52	0.69	1.02
@69KPa(°C-cm²/W)		1.89	2.74	3.34	4.35	6.48
Thermal Expansion (ppm/C)		70	70	70	70	70
Dielectric Strength (Volts)		>4,000	>5,000	>5,000	>7,000	>7,000
Volume Resistivity (ohm-cm)	ASTM D 257	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>	1.2×10 <sup>13</sup>
Dielectric Constant @1MHz	ASTM D 150	6.1	6.1	6.1	6.1	6.1

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