

# THERM vs -GASKET Comparison Chart

## Properties

	-Therm Muscovite	-Therm Phlogopite	-Gasket Muscovite	-Gasket Phlogopite
Mica Content (IEC 60371-2)	85-90%	85-90%	92%	92%
Silicone Binder Content (IEC 60371-2)	10-15%	10-15%	8%	8%
Density (IEC 60371-2)	2.2-2.3g/cm <sup>3</sup>	2.2-2.3g/cm <sup>3</sup>	1.8-1.9g/cm <sup>3</sup>	1.8-1.9g/cm <sup>3</sup>
Heat Resistance				
Continuous Service	500°C	700°C	500°C	700°C
Intermittent Service	800°C	1000°C	800°C	1000°C
Compressive Strength (ISO 604)				
20°C	400MPa	330MPa		
200°C	250MPa	240MPa		
Flexural Strength	33350psi	24650psi		
Tensile Strength (ISO 527)	150 N/mm <sup>2</sup>	100 N/mm <sup>2</sup>	140-150 N/mm <sup>2</sup>	100-110 N/mm <sup>2</sup>
Weight Loss at Continuous Heating 500°C and 700°C	< 1%	< 1-2%		
Thermal Conductivity (W/m.K)	0.3	0.3	0.3	0.3
Bending Strength (ISO 178)	230 MPa	170 MPa	230 MPa	170 MPa
Water Absorption (ISO 62)	<1% (24h/23°C)	<1% (24h/23°C)	<1% (24h/23°C)	<1% (24h/23°C)
Dielectric Strength: (IEC 60243) - 20°C	25 kV/mm	25 kV/mm	>20 kV/mm	>20 kV/mm
Insulation Resistance - 20°C	10 <sup>16</sup> Ohms/cm	10 <sup>16</sup> Ohms/cm		
Volume Resistivity: (IEC 60093)				
23°C	> 10 <sup>16</sup> B/cm	> 10 <sup>16</sup> B/cm	> 10 <sup>17</sup> B/cm	> 10 <sup>17</sup> B/cm
550 °C	> 10 <sup>9</sup> B/cm	> 10 <sup>9</sup> B/cm	> 10 <sup>12</sup> B/cm	> 10 <sup>12</sup> B/cm
Heat Loss: (IEC 60371-2)				
500°C	<1%	<1%	<1%	<1%
700°C		<2%		<2%
Thermal Expansion:				
Perpendicular	100 x 10 <sup>-6</sup> /°K	100 x 10 <sup>-6</sup> /°K	60 / 10 <sup>-6</sup> /K	60 / 10 <sup>-6</sup> /K
Parallel	10 x 10 <sup>-6</sup> /°K	10 x 10 <sup>-6</sup> /°K	10 / 10 <sup>-6</sup> /K	10 / 10 <sup>-6</sup> /K