



EUROPEAN
SEALING
TECHNOLOGY
Seals for industry

RIGID MICA

MUSCOVITE & PHLOGOPITE

Technical data sheet



European Sealing Technology - Industrial sealing solutions

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Rigid Mica Plate

EST Rigid Mica plate consist of either Muscovite or Phlogopite mica impregnated with high temperature silicon. Both provide outstanding mechanical, electrical and thermal properties in high demanding industrial application where high temperature resistance is required. Muscovite is better than Phlogopite regarding mechanical stress while Phlogopite present better resistance to temperature.

Properties	Muscovite	Phlogopite
Mica	>90%	>90%
Bonding material (Silicone)	<10%	<10%
Density	1.7 to 2.15 g/cm ³	1.7 to 2.15 g/cm ³
Heat resistance		
Continus service	500°C	700°C
Intermittent service	750°C	1000°C
Tensile strenght	>150N/mm ²	>110N/mm ²
Flexural strength	>180N/mm ²	>100N/mm ²
Water absorption	<1% (24h ;23°C)	<1.5% (24h ;23°C)
Dielectric strength		
At 20°C	20KV/mm	20KV/mm
At 400°C	13KV/mm	13KV/mm
At 600°C		10KV/mm
Thermal conductivity		
At 20°C	0.26W(m K)	0.26W(m K)
At 200°C	0.28W(m K)	0.28W(m K)
At 400°C	0.30W(m K)	0.30W(m K)
At 600°C		0.32W(m K)
Volume resistivity		
At 20°C	> 10 ¹⁷ Ω/cm	> 10 ¹⁷ Ω/cm
At 400°C	> 10 ¹³ Ω/cm	> 10 ¹³ Ω/cm
Weigth loss		
At 500°C (continuous)	<1%	<1%
At 700°C (continuous)		<2%
Compressive strength		
Parallel to layers	>50 N/mm ²	>50 N/mm ²
Perpendicular to layers	>300 N/mm ²	>200 N/mm ²
Thermal expansion		
Perpendicular to layers	100 x 10 ⁻⁶ /°K	100 x 10 ⁻⁶ /°K
Parallel to layers	10 x 10 ⁻⁶ /°K	10 x 10 ⁻⁶ /°K
Tracking resistance	KA 3c (VDA 0303/1)	KA 3c (VDA 0303/1)