ELTIMID® HP

Material description	High-temperature polyimide, natural
Colour	Red-brown
Applications	Valve seats, machine components, insulators, seals
Available forms	Cut-to-size pieces, round rods and parts to drawings

MECHANICAL AND PHYSICAL PROPERTIES

Properties	Test method / standard	Unit	Value
Tensile strength	DIN EN ISO 527	MPa	140
Tensile modulus		MPa	3581
Flexural strength	DIN EN ISO 178	MPa	188
Flexural strain		%	11.1
Flexural modulus		MPa	3705
Compressive strength	DIN EN ISO 604	MPa	470
Compressive stress at 10% strain		MPa	165
Compressive modulus		MPa	1960
Shore hardness	EN ISO 868	Shore D	90
Specific density	-	g/cm³	1.38
Water absorption 24 h at 80 °C 48 h at 80 °C	DIN EN ISO 62	%	 1.7 2.2

THERMAL PROPERTIES

Properties	Test method / standard	Unit	Value
Continuous operating temperature	-	°C	280
Short-term operating temperature (under low load) < 3 h < 1 h	-	°C	 400 450
Specific heat capacity	DSC	J/g x K	0.925
Thermal conductivity	DSC	W/m x K	0.22
Glass transition temperature Tg (tan δ max)	DTMA	°C	361

ELECTRICAL PROPERTIES

Properties	Test method / standard	Unit	Value
Relative permittivity 1 kHz 10 kHz 100 kHz	IEC 60250	-	 4.2 4.1 4.1
Dielectric loss factor 1 kHz 10 kHz 100 kHz		-	 1.5×10^{-3} 3.1×10^{-3} 6.8×10^{-3}
Specific surface resistance	DIN IEC 93	Ω	5×10^{15}
Specific volume resistivity	DIN IEC 93	Ωm	8×10^{13}
Dielectric breakdown strength	DIN IEC 60243-1	kV/mm	21.8
Flammability class	UL 94	-	V0

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Subject to changes resulting from technical developments. The reference values stated in this datasheet do not constitute contractual specifications.

Our consulting engineers and technicians are available to help determine the suitability of the material.