

OVERVIEW TECHNICAL DATA

ELTIMID® CP

Material description	High-temperature polyimide, natural
Colour	ochre/beige
Application	valve seats, machine components, insulators, seals
Available as	blanks, rods and components as per drawing

Mechanical and physical properties

Properties	Test method/ standard	Unit	Value
Tensile strength	DIN EN ISO 527	MPa	70
Elongation at break		%	3,4
Tensile modulus		MPa	2430
Flexural strength	DIN EN ISO 178	MPa	105
Flexural strain at break		%	3,8
Flexural modulus		MPa	3060
Compressive strength	DIN EN ISO 604	MPa	600
Compressive stress at 10 % compression		MPa	150
Compressive stress at 50 % compression		MPa	560
Compressive modulus		MPa	4520
Shore hardness	EN ISO 868	Shore D	82
Coefficient of friction static dynamic	-	μ	0,46
			0,65
Wear	-	g/KWh	0,35
Oil/grease resistance	-	-	resistant
Specific density	-	g/cm ³	1,27
Water absorption 24 h at 23 °C 48 h at 23 °C 96 h at 23 °C 3 weeks at 23 °C 24 h at 80 °C 48 h at 80 °C 96 h at 80 °C 3 weeks at 80 °C	DIN EN ISO 62	%	0,6
			0,8
			1,2
			2,2
			1,7
			2,1
			2,7
-			

Thermal properties

Properties	Test method/ standard	Unit	Value
Long-term service temperature	-	°C	280
Short-term service temperature < 3h < 1h (under minimal load)	-	°C	400 450
Coefficient of linear thermal expansion	DIN 53752/ TMA	10 ⁻⁶ x K ⁻¹	62
Specific heat capacity	DSC	J/g x K	1,138
Thermal conductivity	DSC	W/m x K	0,2
Glass transition temperature T _g (tan delta _{max})	DMA	°C	362

Electrical characteristics

Properties	Test method/ standard	Unit	Value
Dielectric constant 100 Hz 1 kHz 10 kHz 100 kHz		-	3,29
			3,29
			3,28
			3,26
Dielectric dissipation factor 100 Hz 1 kHz 10 kHz 100 kHz	IEC 60250	-	4,8 x 10 ⁻³
			1,5 x 10 ⁻³
			3,1 x 10 ⁻³
			6,8 x 10 ⁻³
			-
Surface resistivity	DIN IEC 93	Ω	1,0 x 10 ¹⁵
Volume resistivity		Ωm	3,0 x 10 ¹⁶
Tracking resistance	DIN EN 60112	-	CTI 175
Electric strength	DIN IEC 60243-1	kV/3 mm	87
Flammability rating	UL 94	-	V0

 Issue:
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We reserve the right to make changes in the context of further technical developments. The guide values listed in this data sheet are not contractual data.

Please contact our applications and sales engineers to clarify the suitability of the material for your application.