

OVERVIEW TECHNICAL DATA

DoglideEltimid® 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	-	μ	0,46
dynamic			0,65
Wear	-	g/KWh	0,35
Oil/grease resistance	-	-	resistant
Specific density	-	g/cm ³	1,27
Water absorption	DIN EN ISO 62	%	0,6
24 h at 23 °C			0,8
48 h at 23 °C			1,2
96 h at 23 °C			2,2
3 weeks at 23 °C			1,7
24 h at 80 °C			2,1
48 h at 80 °C			2,7
96 h at 80 °C			-
3 weeks at 80 °C			-

→ Thermal properties

Properties	Test method/standard	Unit	Value
Long-term service temperature	-	°C	280
Short-term service temperature	-	°C	400
< 3h			450
< 1h (under minimal load)			
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 properties

Properties	Test method/standard	Unit	Value
Dielectric constant	IEC 60250	-	3,29
100 Hz			3,29
1 kHz			3,28
10 kHz			3,26
100 kHz			
Dielectric dissipation factor	-	-	4,8 x 10 ⁻³
100 Hz			1,5 x 10 ⁻³
1 kHz			3,1 x 10 ⁻³
10 kHz			6,8 x 10 ⁻³
100 kHz			
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

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The standard values shown in this data sheet are measured by standard test methods. Depending on operation terms and dimensions the material properties can differ from these values.

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