

Technical Properties of: ZELLAMID® 1100 Oil (PA 6 C)					
Edition / Date: 1 / 01-01-2016					
Characteristics		Unit	Test method	Condition of specimen	Value
MECHANICAL PROPERTIES					
Yield stress	23 °C	MPa	ISO 527		80
Elongation at break	23 °C	%	ISO 527		50
Tensile E-Modulus		MPa	ISO 527		2 500
Bending Modulus		MPa	ISO 178		2 800
Flexural Strength		MPa	ISO 178		135
Charpy impact strength	23 °C	kJ/m ²	ISO 179/1eU		no break
Charpy Notched Impact Strength	23 °C	kJ/m ²	ISO 179/1eA		≥ 5
Ball Hardness		MPa	ISO 2039-1		140
THERMAL PROPERTIES					
Melting Temperature		°C	ISO 3146		220
Maximum Service Temperature for Few Hours Operation		°C	-		160
Service temperature long term		°C	-		105
Minimum service temperature		°C	-		-40
Specific Heat Capacity		J/(g.K)	IEC 1006	dry	1.7
Coefficient of thermal expansion		1/K10 ^{^-5}	DIN 53752		≥ 7 ≤ 8
Thermal Conductivity	Method A	W/(K.m)	-	dry	0.23
DIELECTRIC PROPERTIES					
Dielectric Constant	1 MHz		IEC 60250		3.7
Dissipation Factor Tan δ	1 MHz		IEC 60250		0.03
Dielectric Strength		KV/mm	IEC 60243		50
Volume Resistivity		Ω.cm	IEC 60093		10 ¹⁵
Surface Resistivity		Ω	IEC 60093		10 ¹³
Resistance to Tracking (CTI)			IEC 60112		600
PHYSICAL PROPERTIES					
Density	23 °C	g/cm ³	ISO 1183-1		1.15
BURNING BEHAVIOUR					
Flammability classification*			UL 94		HB
GENERAL					
Water Absorption	23 °C, saturation	%	ISO 62		5.5
	23 °C / 50% RH	%	ISO 62		1.8
Food contact			-		+
Food contact approval			FDA		+
			EU 10/2011		/
Dimensional Stability			-		-
Coefficient of Friction			-		+
Wear Resistance			-		+
RESISTANCE					
Chemical Resistance			-		+

Resistance to wear tested by a pin / rotating disc test according DIN ISO 7148-2 under following conditions: Ra = 0.35 - 0.45 µm (steel disc), v = 0.3 m/s, p = 3 N/mm², time T > 16 h

Explanation Symbols: + good 0 neutral - not good / actually not available

Tests are done under dry conditions at room temperature

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