

Technical Properties of: <b>ZELLAMID® 900 (POM-C)</b>					
Edition / Date: 2 / 01-01-2016					
Characteristics	Unit	Test method	Condition of specimen	Value	
<b>MECHANICAL PROPERTIES</b>					
Yield stress	23 °C	MPa	ISO 527		65
Tensile strength	23 °C	MPa	ISO 527		65
Elongation at break	23 °C	%	ISO 527		40
Tensile E-Modulus		MPa	ISO 527		2 900
Bending Modulus		MPa	ISO 178		2 800
Flexural Strength		MPa	ISO 178		95
Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179/1eU		no break
Charpy Notched Impact Strength	23 °C	kJ/m <sup>2</sup>	ISO 179/1eA		7
Shore D hardness			ISO 868		81
Ball Hardness		MPa	ISO 2039-1		125
Compressive modulus		MPa	ISO 604		2 400
Compressive Stress	1 % Nominal Strain	MPa	ISO 604		23
	2 % Nominal Strain	MPa	ISO 604		44
	5 % Nominal Strain	MPa	ISO 604		82
<b>THERMAL PROPERTIES</b>					
HDT-A	1,82 MPa	°C	ISO 75		110
Glass Transition Temperature		°C	ISO 3146		-60
Melting Temperature		°C	ISO 3146		164
Maximum Service Temperature for Few Hours Operation		°C	-		140
Service temperature long term		°C	-		100
Minimum service temperature		°C	-		-50
Specific Heat Capacity		J/(g.K)	IEC 1006	dry	1.5
Coefficient of thermal expansion		1/K10 <sup>4</sup> (-5)	DIN 53752		11
Thermal Conductivity	Method A	W/(K.m)	-	dry	0.336
<b>DIELECTRIC PROPERTIES</b>					
Dielectric Constant	1 MHz		IEC 60250		3.8
Dissipation Factor Tan δ	1 MHz		IEC 60250		0.005
Dielectric Strength		KV/mm	IEC 60243		> 20
Volume Resistivity		Ω.cm	IEC 60093		10 <sup>14</sup>
Surface Resistivity		Ω	IEC 60093		10 <sup>13</sup>
Resistance to Tracking (CTI)			IEC 60112		600
<b>PHYSICAL PROPERTIES</b>					
Density	23 °C	g/cm <sup>3</sup>	ISO 1183-1		1.41
<b>BURNING BEHAVIOUR</b>					
Flammability classification*			UL 94		HB
<b>GENERAL</b>					
Water Absorption	23 °C, saturation	%	ISO 62		0.8
	23 °C / 50% RH	%	ISO 62		0.2
Food contact approval			FDA		+
Dimensional Stability			-		+
Coefficient of Friction			-		+
Wear Resistance			-		-
<b>RESISTANCE</b>					
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/mm<sup>2</sup>, 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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