

Technical Properties of:		ZELLAMID® 1400 (PET)			
Edition / Date:		2 / 01-01-2016			
Characteristics	Unit	Test method	Condition of specimen	Value	
MECHANICAL PROPERTIES					
Yield stress	23 °C	MPa	ISO 527		88
Tensile strength	23 °C	MPa	ISO 527		88
Elongation at break	23 °C	%	ISO 527		10
Tensile E-Modulus		MPa	ISO 527		3 400
Bending Modulus		MPa	ISO 178		3 300
Flexural Strength		MPa	ISO 178		130
Charpy impact strength	23 °C	kJ/m ²	ISO 179/1eU		82
Charpy Notched Impact Strength	23 °C	kJ/m ²	ISO 179/1eA		2.8
Shore D hardness			ISO 868		81
Ball Hardness		MPa	ISO 2039-1		177
Compressive modulus		MPa	ISO 604		2 400
Compressive Stress	1 % Nominal Strain	MPa	ISO 604		28
	2 % Nominal Strain	MPa	ISO 604		53
	5 % Nominal Strain	MPa	ISO 604		100
THERMAL PROPERTIES					
HDT-A	1,82 MPa	°C	ISO 75		100
Melting Temperature		°C	ISO 3146		255
Maximum Service Temperature for Few Hours Operation		°C	-		160
Service temperature long term		°C	-		100
Minimum service temperature		°C	-		-20
Thermal Coefficient of Linear Expansion		1/K·10 ⁻⁵	DIN 53752	dry	6
Coefficient of thermal expansion		1/K10 ^{^(-5)}	DIN 53752		6
DIELECTRIC PROPERTIES					
Dielectric Constant	1 MHz		IEC 60250		3.3
Dissipation Factor			IEC 60250		0.02
Dielectric Strength		KV/mm	IEC 60243		20
Volume Resistivity		Ω.cm	IEC 60093		10 ¹⁵
PHYSICAL PROPERTIES					
Density	23 °C	g/cm ³	ISO 1183-1		1.36
BURNING BEHAVIOUR					
Flammability classification*			UL 94		HB
GENERAL					
Water Absorption	23 °C, saturation	%	ISO 62		0.5
	23 °C / 50% RH	%	ISO 62		0.23
Food contact			-		+
Food contact approval			FDA		+
			EU 10/2011		+
Dimensional Stability			-		+
Coefficient of Friction			-		+
Wear Resistance			-		O
RESISTANCE					
Chemical Resistance			-		+
MISCELLANEOUS PROPERTIES					
Resistance to Wear		µm/km	ISO 7148-2	dry	2.5

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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