

Technical Properties of:		ZELLAMID® 1400 T (PET filled)			
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		80
Tensile strength	23 °C	MPa	ISO 527		80
Elongation at break	23 °C	%	ISO 527		10
Tensile E-Modulus		MPa	ISO 527		3 300
Bending Modulus		MPa	ISO 178		3 000
Flexural Strength		MPa	ISO 178		115
Charpy impact strength	23 °C	kJ/m <sup>2</sup>	ISO 179/1eU		60
Charpy Notched Impact Strength	23 °C	kJ/m <sup>2</sup>	ISO 179/1eA		2.8
Shore D hardness			ISO 868		81
Ball Hardness		MPa	ISO 2039-1		175
Compressive modulus		MPa	ISO 604		2 800
Compressive Stress	1 % Nominal Strain	MPa	ISO 604		27
	2 % Nominal Strain	MPa	ISO 604		55
	5 % Nominal Strain	MPa	ISO 604		97
<b>THERMAL PROPERTIES</b>					
HDT-A	1,82 MPa	°C	ISO 75		100
Maximum Service Temperature for Few Hours Operation		°C	-		160
Service temperature long term		°C	-		110
Minimum service temperature		°C	-		-20
Coefficient of thermal expansion		1/K10 <sup>4</sup> (-5)	DIN 53752		6
<b>DIELECTRIC PROPERTIES</b>					
Dielectric Constant	1 MHz		IEC 60250		3.3
Dielectric Strength		KV/mm	IEC 60243		20
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		1.39
<b>BURNING BEHAVIOUR</b>					
Flammability classification*			UL 94		HB
<b>GENERAL</b>					
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			-		+
<b>RESISTANCE</b>					
Chemical Resistance			-		+
<b>MISCELLANEOUS PROPERTIES</b>					
Resistance to Wear		µm/km	ISO 7148-2	dry	1.1

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

All statements, technical information and recommendations contained in this data sheet are presented in good faith, but all information given is without warranty and liability. Properties of the delivered products can vary because of differences to the testing samples. Non-tested values are fulfilled with raw material datas and literature information. The reader is cautioned, however that Zell-Metall cannot guarantee the accuracy or completeness of this information, and it is the customer's responsibility to determine the suitability of Zell-Metall products in any given application.