ZELL MATERIALS GMBH
Schulstrasse 16 · 5710 Kaprun, Austria
T +43 6547 8417 · F +43 6547 8890
office@zellamid.com · **ZELLAMID.com**
klepsch group - the plastic power network

Technical Properties of:		**ZELLAMID® 1500 XTW (PEEK)**			
Edition / Date:					**preliminary/ 22.08.2025**
Characteristics		**Unit**	**Test method**	**Condition of specimen**	**Value**
MECHANICAL PROPERTIES					
Yield stress	23°C	MPa	ISO 527		---
Tensile strength	23 °C	MPa	ISO 527		105-195
Elongation at break	23°C	%	ISO 527		1,8
Tensile E-Modulus		MPa	ISO 527		4000-9500
Bending Modulus		MPa	ISO 178		3900-7000
Flexural Strength		MPa	ISO 178		160-290
Charpy impact strength	23 °C	kJ/m²	ISO 179/1eU		35
Charpy Notched Impact Strength	23 °C	kJ/m²	ISO 179/1eA		5,0
Shore D hardness			ISO 868		85
Ball Hardness		MPa	ISO 2039-1		---
Compressive modulus		MPa	ISO 604		3700
Compressive Stress	1%/2%/5% Nominal Strain	MPa	ISO 604		250
THERMAL PROPERTIES					
HDT-A	1,82 MPa	°C	ISO 75		343
Glass Transition Temperature		°C	ISO 3146		143
Melting Temperature		°C	ISO 3146		---
Maximum Service Temperature for Few Hours Operation		°C	-		---
Service temperature long term		°C	-		---
Minimum service temperature		°C	-		---
Specific Heat Capacity		J/(g.K)	IEC 1006	dry	---
Coefficient of thermal expansion		1/K10^(-5)	DIN 53752		---
Thermal Conductivity	Method A	W/(K.m)	-	dry	1,300
DIELECTRIC PROPERTIES					
Dielectric Constant	1 MHz		IEC 60250		---
Dissipation Factor Tan δ	1 MHz		IEC 60250		---
Dielectric Strength		KV/mm	IEC 60243		---
Volume Resistivity		Ω.cm	IEC 60093		10^6
Surface Resistivity		Ω	IEC 60093		---
Resistance to Tracking (CTI)			IEC 60112		---
PHYSICAL PROPERTIES					
Density	23°C	g/cm³	ISO 1183-1		1,44
BURNING BEHAVIOUR					
Flammability classification*			UL 94		---
GENERAL					
Water Absorption	23°C, saturation	%	ISO 62		0,6
	23°C / 50% RH	%	ISO 62		0,3
Food contact	-		-		---
Food contact approval			FDA		---
			EU 10/2011		---
Dimensional Stability			-		+
Coefficient of Friction			-		+
Wear Resistance			-		+
RESISTANCE					
Chemical Resistance			-		+
Verschleißrate		µm/km	ISO 7148-2	trocken	---

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