

Zell-Metall Engineering Plastics Zellamid 1500 (PEEK)

Category : Polymer , Thermoplastic , Polyketone , Polyetheretherketone (PEEK) , Polyetheretherketone, PEEK, Unreinforced

Material Notes:

Zellamid® 1500 (Polyetheretherketone - PEEK, natural) is the registered trademark for Zell-Metall's semi-crystalline high performance thermoplastic which exhibits a unique combination of high mechanical properties, temperature resistance and excellent chemical resistance, making it the most popular advanced plastics material. Fields: Nuclear and Vacuum Technology, Aerospace Industry, Mechanical and Automotive Engineering, Conveyor Technology, Semiconductor Production, Electrical and Electronics, Wire and Cable, Oil Exploration, Chemical Processing Industry. Besides of the standard grade for tribological applications also our Zellamid® 1500 T grade is available in black color, modified with 10% Carbonfibre, 10% PTFE and 10% Graphite. Zellamid® 1500 T has an outstanding wear resistance and an even lower coefficient of friction as well as higher Pressure-Velocity capabilities.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Zell-Metall-Engineering-Plastics-Zellamid-1500-PEEK.php

Physical Properties	Metric	English	Comments
Density	1.32 g/cc	0.0477 lb/in ³	
Moisture Absorption at Equilibrium	0.10 %	0.10 %	Saturation at 50% RH; ISO 1110; DIN 53714
Water Absorption at Saturation	0.50 %	0.50 %	23°C; ISO 62; DIN 53495

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	97.0 MPa	14100 psi	ISO 527; DIN 53455
Elongation at Break	25 %	25 %	ISO 527; DIN 53455
Tensile Modulus	3.60 GPa	522 ksi	ISO 527; DIN 53452
Charpy Impact Unnotched	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179; DIN 53453

Thermal Properties	Metric	English	Comments
CTE, linear	47.0 µm/m-°C @Temperature 20.0 °C	26.1 µin/in-°F @Temperature 68.0 °F	DIN 53752
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft ² -°F	DIN 53612 Method A
Melting Point	340 °C	644 °F	ISO 1218 Method A; DIN 53736
Maximum Service Temperature, Air	260 °C	500 °F	5000 hours; 50% Tensile Strength; IEC 216; DIN 53446
	300 °C	572 °F	a few hours operation
Deflection Temperature at 1.8 MPa	152 °C	306 °F	

(264 psi) Thermal Properties	Metric	English	ISO 75; DIN 53461 Comments
Flammability, UL94	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+16 ohm-cm	1.00e+16 ohm-cm	IEC 167; DIN 53482
Dielectric Strength	20.0 kV/mm	508 kV/in	IEC 243; DIN 53481
Dissipation Factor	0.0040	0.0040	IEC 250; DIN 53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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