

Datasheet AE1500XGF30



This glass fiber filled material significantly reduces the rate of thermal expansion and increases the flexural modulus of unfilled PEEK. This grade is ideal for structural applications that require improved strength, stiffness or dimensional stability, especially at temperatures above 150 °C.

Application

Material

PEEK with glass fiber.

Availability

	Value	Unit
Rod diameters	6-100	mm
Tube inside diameter	on request	
Tube outside diameter	on request	
Length standard	3000	mm
Sheet thickness	mei-80	mm
Sheet size	1000x2000	mm

AE1500XGF30 - Specifications

Physical properties

	Test standard	Value	Unit
Density		1,51	g/cm ³
Thermal conductivity		on request	
Specific heat capacity		on request	
Moisture absorption at 23°C, 50% RH	ISO 62	0,1	%
Water absorption at 23 °C	ISO 62	0,4	%
Flammability	UL 94	V-0	[-]

Mechanical properties

	Test standard	Value	Unit
Tensile strength	ISO 527	150	MPa
Hardness	ISO 868	88	SHORE-D
Yield stress	ISO 527	150	MPa
Elongation at break	ISO 527	4	%
Modulus of elasticity in tension	ISO 527	8700	MPa
Bending modulus		on request	
Flexural strength		on request	
Charpy impact strength +23°C	ISO 179/1eU	55	kJ/m ²
Charpy notched impact strength +23°C	ISO/1eA	5	kJ/m ²
Ball indentation hardness	ISO 2039-1	305	MPa
Compressive modulus	ISO 604	9950	MPa

Thermal properties

	Test standard	Value	Unit
Min. working temperature		-20	°C
Max. working temperature		240	°C
Intermittent working temperature		300	°C
Heat distortion temperature	Method A ISO 75	312	°C
Melting temperature	ISO 3146	340	°C
Glass transition temperature	ISO 3146	150	°C
Thermal coefficient of linear expansion	DIN 53752	3	1/K.10-5

Friction properties

	Test standard	Value	Unit
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Electrical properties

	Test standard	Value	Unit
Dielectric constant		on request	
Dielectric loss factor		on request	
Dielectric strength	IEC 243	17	KV/mm

Electrical properties

Dielectric constant at 1MHZ	IEC 250	3,3	[-]
Volume resistivity	IEC 93	10^{15}	$\Omega \cdot \text{cm}$
Surface resistivity	IEC 93	10^{14}	Ω
Resistance to tracking (CTI)		on request	

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