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# Datasheet AE1500SCA30



Stiffness and compressive strength are superior to unfilled PEEK. This carbon fiber filled material features improved dimensional stability and offers excellent wear resistance as well as a very low coefficient of friction. The carbon fibers dramatically reduce the thermal expansion and the much higher thermal conductivity helps to keep the surface of a bearing cool.

#### Application

#### Material

PEEK with Carbon fiber.

#### Availablity

	Value	Unit
Rod diameters	jun-80	mm
Tube inside diameter	on request	
Tube outside diameter	on request	
Length standard	3000	mm
Sheet thickness	mei-60	mm
Sheet size	1000x2000	mm



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# AE1500SCA30 - Specifications

## **Physical properties**

	Test standard	Value	Unit
Density		1,4	g/cm³
Thermal conductivity	Method A	0,92	W/m°K
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	120	MPa
Yield stress	ISO 527	124	MPa
Elongation at break	ISO 527	9	%
Modulus of elasticity in tension	ISO 527	7100	MPa
Bending modulus		on request	
Flexural strength	ISO 178	200	MPa
Charpy impact strength +23°C	ISO 179/1eU	105	kJ/m²
Charpy notched impact strength +23°C	ISO/1eA	6,5	kJ/m²
Ball indentation hardness	ISO 2039-1	346	MPa
Compressive modulus	ISO 604	11000	МРа

#### **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	315	°C
Melting temperature	ISO 3146	340	°C
Glass transition temperature	ISO 3146	150	°C
Thermal coefficient of linear expansion	DIN 53752	1 - 4	1/K.10-5

#### **Friction properties**

Test standard	Value	Unit

# **Electrical properties**

	Test standard	Value	Unit
Dielectric constant		on request	
Dielectric loss factor		on request	
Dielectric strength		on request	
Dielectric constant at 1MHZ	IEC 250	17	[-]

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## **Electrical properties**

Volume resistivity	IEC 93	10 <sup>5</sup>	Ω.cm
Surface resistivity	IEC 93	10 <sup>5</sup>	Ω
Resistance to tracking (CTI)		on request	

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