

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.

Availability

	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



AE1500SCA30 - Specifications

Physical properties

	Test standard	Value	Unit
Density		1,4	g/cm ³
Thermal conductivity	Method A	0,92	W/m ² 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/m ²
Charpy notched impact strength +23°C	ISO/1eA	6,5	kJ/m ²
Ball indentation hardness	ISO 2039-1	346	MPa
Compressive modulus	ISO 604	11000	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	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	[-]

Electrical properties

Volume resistivity	IEC 93	10^5	$\Omega \cdot \text{cm}$
Surface resistivity	IEC 93	10^5	Ω
Resistance to tracking (CTI)		on request	

The information in this datasheet is provided for general purposes only and not meant to be a specific recommendation for any individual application. All values were determined under laboratory conditions. ASEC Products is not directly neither indirectly responsible for any claim resulting from the use of any information provided in this datasheet.