

Datasheet AE1100HS



Basically the properties are to be compared with those of AE1100 but better protected against thermal oxidative degradation by a heat aging stabilizer. Therefore, this material is mechanically resistant for longer service temperatures.

Application

Material

Cast nylon polyamide 6 (PA6C) heatstabilized.

Availability

	Value	Unit
Rod diameters	30-800	mm
Tube inside diameter	30-840	mm
Tube outside diameter	50-880	mm
Length standard	1000/2000	mm
Sheet thickness	8-165	mm
Sheet size	1000/1220x1000/2000/3050	mm



AE1100HS - Specifications

Physical properties

	Test standard	Value	Unit
Density		1,15	g/cm ³
Thermal conductivity	Method A	0,23	W/m ^{°K}
Specific heat capacity	IEC 1006	1,7	J/g.K
Moisture absorption at 23°C, 50% RH	ISO 62	2,2	%
Water absorption at 23 °C	ISO 62	7	%
Flammability	UL 94	HB	[-]

Mechanical properties

	Test standard	Value	Unit
Yield stress	ISO 527	90	MPa
Elongation at break	ISO 527	30	%
Modulus of elasticity in tension	ISO 527	2500	MPa
Bending modulus	Flexural test	3000	MPa
Flexural strength	ISO 178	120	MPa
Charpy impact strength +23°C	ISO 179/1eU	no break	kJ/m ²
Charpy notched impact strength +23°C	ISO/1eA	>4	kJ/m ²
Ball indentation hardness	ISO 2039	170	N/mm ²
Compressive modulus		on request	

Thermal properties

	Test standard	Value	Unit
Min. working temperature		-40	°C
Max. working temperature		105	°C
Intermittent working temperature		180	°C
Heat distortion temperature		on request	
Melting temperature	ISO 3146	220	°C
Thermal coefficient of linear expansion	DINB 53752	7 - 8	1/K.10-5

Friction properties

	Test standard	Value	Unit
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Electrical properties

	Test standard	Value	Unit
Dielectric constant	DIN 53483	3,7	[-]
Dielectric loss factor	DIN 53483	0,03	[-]
Dielectric strength	IEC 243	50	KV/mm
Dielectric constant at 1MHZ	IEC 250	3,7	[-]
Volume resistivity	IEC 93	10 ¹⁵	Ω.cm
Surface resistivity	IEC 93	10 ¹³	Ω

Electrical properties

Resistance to tracking (CTI)	DIN EN 60112	600	[-]
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