

Datasheet AE1200



AE1200 is manufactured from the raw material Laurin lactam in a pressure less monomer molding process. The seamless transition from polymerization to crystallization creates a high crystalline structure for rigid applications.

Application

Vibration dampeners, tie fasteners for high speed rail roads, shock absorbers in bumpers and crash buffers in railway-wagons, mobile phone antennas.

Material

Cast Polyamide 12.

Availability

	Value	Unit
Rod diameters	30-250	mm
Tube inside diameter	30-230	mm
Tube outside diameter	20-250	mm
Length standard	1000-3000	mm
Sheet thickness	aug-60	mm
Sheet size	1000X3000	mm

AE1200 - Specifications

Physical properties

	Test standard	Value	Unit
Density		1,03	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	0,9	%
Water absorption at 23 °C	ISO 62	1,4	%
Flammability	UL 94	HB	[-]

Mechanical properties

	Test standard	Value	Unit
Yield stress	ISO 527	60	MPa
Elongation at break	ISO-527	55	%
Modulus of elasticity in tension	ISO 527	2200	MPa
Bending modulus	Flexural test	2400	MPa
Flexural strength	ISO 178	90	MPa
Charpy impact strength +23°C	ISO 179/1eU	no break	kJ/m ²
Charpy notched impact strength +23°C	ISO/1eA	>15	kJ/m ²
Ball indentation hardness		on request	
Compressive modulus		on request	

Thermal properties

	Test standard	Value	Unit
Min. working temperature		-60	°C
Max. working temperature		110	°C
Intermittent working temperature		150	°C
Heat distortion temperature		on request	
Melting temperature	ISO 3146	190	°C
Thermal coefficient of linear expansion	DIN 53752	10 - 11	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	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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