

Nylon 12 Rod - Technical Data Sheet



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Physical Properties	Value	Unit	Method of verification
Density	1.04	g/cm ³	ISO 1183
Moisture pick-up till saturation (in normal climate 23 °C)	0.7	%	ISO 62
Water absorption till saturation (in water at 23 °C)	1.5	%	ISO 62

Mechanical properties	Value	Unit	Method of verification
Tensile stress at yield (v = 50 mm/min):	40	N/mm ²	ISO 527-2
Tensile stress at break (v = 5 mm/min):	-	N/mm ²	ISO 527-2
Nominal percentage elongation at break	> 50	%	ISO 527-2
Tensile modulus of elasticity	1300	N/mm ²	ISO 527-2
Flexural modulus of elasticity	-	N/mm ²	ISO 178
Ball indentation hardness (value at 30 s):	-	N/mm ²	ISO 2039-1
Rockwell hardness	M 80	-	ISO 2039-2
Charpy impact strength (23 °C) :	n. br. ***	kJ/m ²	ISO 179/1eU
Charpy impact strength - notched (23 °C)	10	kJ/m ²	ISO 179/1eA

Thermal properties	Value	Unit	Method of verification
Temperature for using in air (maximum):	150	°C	Max. short term
Temperature for using in air (maximum):	95	°C	Max. lasting
Temperature for using in air (maximum):	-	°C	-
Heat distortion temperature (HDT A process):	50	°C	ISO 75-2
Coefficient of linear expansion, at length (23-60)°C	1.2·10 ⁻⁴	1/K	DIN 53752
Thermal conductivity (23 °C)	0.23	W/(K·m)	DIN 52612
Flammability according UL standard:	-	Grade	UL 94
Vicat softening temperature (VST/B/50):	-	°C	ISO 306
Melting point DSC (10 K/min):	178	°C	ISO 3146

Electrical properties	Value	Unit	Method of verification
Specific volume resistivity:	1011	Ω ·m	IEC 60093
Specific surface resistivity:	1012	Ω	IEC 60093
Dielectric factor (at 1 MHz)**:	3.6	-	IEC 60250
Dielectric factor (at 100 Hz)**:	-	-	IEC 60250
Dissipation factor (at 1 MHz)**:	0.026	-	IEC 60250
Dissipation factor (at 100 Hz)**:	-	-	IEC 60250
Dielectric strength K20/K20:	32	kV/mm	IEC 60243-1
Comparative tracking index (CTI):	600	-	IEC 60112

* Please check the restriction

** Values do not apply to black coloured qualities

*** n. br. = no break