

Nylon 6 Rod - Technical Data Sheet



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Physical Properties:	Value	Unit	Method of verification
Density:	1.14	g/cm ³	ISO 1183
Moisture pick-up till saturation (in normal climate 23 °C) :	2.5	%	ISO 62
Water absorption till saturation (in water at 23 °C) :	9	%	ISO 62

Thermal properties:	Value	Unit	Method of verification
Temperature for using in air (maximum):	160	°C	Max. short term
Temperature for using in air (maximum):	85	°C	Max. short term
Temperature for using in air (minimum):	-40	°C	-
Heat distortion temperature (HDT A process):	70	°C	ISO 75-2
Coefficient of linear expansion, at length (23-60) °C :	0.9·10 ⁻⁴	1/K	DIN 53752
Thermal conductivity (23 °C):	0.28	W/(K·m)	DIN 52612
Flammability according UL standard:	HB	Grade	UL 94
Vicat softening temperature (VST/B/50):	-	°C	ISO 306
Melting point DSC (10 K/min):	220	°C	ISO 3146

Mechanical properties:	Value	Unit	Method of verification
Tensile stress at yield (v = 50 mm/min):	76	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:	3250	N/mm ²	ISO 527-2
Flexural modulus of elasticity:	-	N/mm ²	ISO 178
Ball indentation hardness (value at 30 s):	150	N/mm ²	ISO 2039-1
Rockwell hardness:	M 85	-	ISO 2039-2
Charpy impact strength (23 °C) :	n. br.**	kJ/m ²	ISO 179/1eU
Charpy impact strength - notched (23 °C) :	5,5	kJ/m ²	ISO 179/1eA

Electrical properties:	Value	Unit	Method of verification
Specific volume resistivity:	1012	Ω·m	IEC 60093
Specific surface resistivity:	1013	Ω	IEC 60093
Dielectric constant (at 1 MHz)*:	3.3	-	IEC 60250
Dielectric constant (at 100 Hz)*:	3.9	-	IEC 60250
Dissipation factor (at 1 MHz)*:	0.021	-	IEC 60250
Dissipation factor (at 100 Hz)*:	0.019	-	IEC 60250
Dielectric strength K20/K20:	25	kV/mm	IEC 60243-1
Comparative tracking index (CTI):	600	-	IEC 60112

* Values do not apply to black coloured qualities

** n. br. = no break