

Engineering Plastics - Cast Nylon

Rod
Properties

Stock		Electrical Properties			
Dia (mm)	Weight (kg/m)	Property	Parameter	Value	Norm
50	2.41	Specific Surface Resistance		10 ¹⁴ Ω	DIN IEC 60093
60	3.54	Specific Volume Resistance		10 ¹⁴ Ω*cm	DIN IEC 60093
65	4.09				
70	4.79				
		Mechanical Properties			
75	5.38	Property	Parameter	Value	Norm
80	6.03	Modulus of Elasticity (tensile test)	1mm/min	3500 MPa	DIN EN ISO 527-2
85	6.82				
90	7.62	Tensile Strength	50mm/min	83 MPa	DIN EN ISO 572-2
95	8.24				
100	9.46	Tensile Strength at Yield	50mm/min	80 MPa	DIN EN ISO 527-2
110	11.38				
120	13.75	Elongation at Yield	50mm/min	4%	DIN EN ISO 527-2
125	15.03				
130	15.99	Elongation at Break	50mm/min	55%	DIN EN ISO 527-2
135	17.73				
140	18.54	Flexural Strength	2mm/min, 10N	109 MPa	DIN EN ISO 178
150	21.60				
160	24.40	Modulus of elasticity (flexural test)	2mm/min, 10N	3200 MPa	DIN EN ISO 178
170	27.30				
180	30.30	Compression Strength	1% / 2% 5mm/min, 10N	19 / 36 MPa	EN ISO 604
190	34.00				
200	37.90	Compression Modulus	5mm/min, 10N	2900 MPa	EN ISO 604
220	46.40				
230	50.20	Impact Strength (Charpy)	max 7.5J	n.b kJ/m ²	DIN EN ISO 179-1eU
250	60.70				
280	76.20	Notched Impact Strength (Charpy)	max 7.5J	4 kJ/m ²	DIN EN ISO 179-1eA
300	86.70				
320	97.70	Ball Indentation Hardness		170 MPa	ISO 2039-1
		Other Properties			
330	104.00	Property	Parameter	Value	Norm
350	117.10	Water Absorption	24h / 96h (23°C)	0.2 / 0.4 %	DIN EN ISO 62
370	131.00	Resistance to Hot Water/Bases		(+)	
400	152.80	Resistance to Weathering		-	-
450	194.40	Flamability (UL94)	corresponding to	HB	DIN IEC 60695-11-10
500	237.10				
600	336.10				
		Thermal Properties			
710	482.90	Property	Parameter	Value	Norm
800	603.70	Glass Transition Temperature		40 °C	DIN 53765
		Melting Temperature		215 °C	DIN 53765
		Service Temperature	short term	170 °C	
		Service Temperature	long term	100 °C	
		Thermal Expansion (CLTE)	23-60°C, long	12 10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2

Thermal Expansion (CLTE)	23-100°C, long	$12 \cdot 10^{-5} \text{ K}^{-1}$	DIN EN ISO 11359-1;2
Specific Heat		1.7 J/(g*K)	ISO 22007-4:2008
Thermal Conductivity		0.38 W/(K*m)	ISO 22007-4:2008

Disclaimer

This data is indicative only and as such is not to be relied upon in place of the full specification. In particular, mechanical property requirements vary widely with temper, product and product dimensions. All information is based on our present knowledge and is given in good faith. No liability will be accepted by the Company in respect of any action taken by any third party in reliance thereon.

The information provided in this datasheet has been drawn from various recognised sources, including EN Standards, recognised industry references (printed & online) and manufacturers' data. No guarantee is given that the information is from the latest issue of those sources or about the accuracy of those sources.

Material supplied by the Company may vary significantly from this data, but will conform to all relevant and applicable standards.

As the products detailed may be used for a wide variety of purposes and as the Company has no control over their use; the Company specifically excludes all conditions or warranties expressed or implied by statute or otherwise as to dimensions, properties and/or fitness for any particular purpose, whether expressed or implied.

Advice given by the Company to any third party is given for that party's assistance only and without liability on the part of the Company. All transactions are subject to the Company's current Conditions of Sale. The extent of the Company's liabilities to any customer is clearly set out in those Conditions; a copy of which is available on request.