

Engineering Plastics - Nylon 6

Rod
Properties

Stock		Electrical Properties			
Dia (mm)	Weight (kg/m)	Property	Parameter	Value	Norm
4	0.017	Specific Surface Resistance	Silver electrode, 23°C, 12% r.h.	10 ¹⁴ Ω	DIN IEC 60093
5	0.026				
6	0.037				
8	0.064	Specific Volume Resistance	Silver electrode, 23°C, 12% r.h.	10 ¹⁴ Ω*cm	DIN EN 61340-2-3
10	0.099				
12	0.143	Dielectric Strength	23°C, 50% r.h.	31 kV/mm	ISO 60243-1
14	0.192				
15	0.219	Resistance to Tracking (CTI)	Platin electrode, 23°C, 50% r.h., solvent A	600 V	DIN EN 60112
16	0.249				
18	0.313				
20	0.384	Mechanical Properties			
22	0.466	Property	Parameter	Value	Norm
25	0.599	Modulus of Elasticity (tensile test)	1mm/min	3300 MPa	DIN EN ISO 527-2
28	0.747				
30	0.855	Tensile Strength	50mm/min	79 MPa	DIN EN ISO 572-2
32	0.977				
36	1.23	Tensile Strength at Yield	50mm/min	78 MPa	DIN EN ISO 527-2
40	1.51				
45	1.92	Elongation at Yield	50mm/min	4%	DIN EN ISO 527-2
50	2.36				
56	2.95	Elongation at Break	50mm/min	130%	DIN EN ISO 527-2
60	3.39				
65	3.97	Flexural Strength	2mm/min, 10N	100 MPa	DIN EN ISO 178
70	4.60				
75	5.30	Modulus of Elasticity	2mm/min, 10N	2900 MPa	DIN EN ISO 178
80	6.02				
85	6.81	Compression Strength	1% / 2% 5mm/min, 10N	24/41 MPa	EN ISO 604
90	7.62				
100	9.42	Compression Modulus	5mm/min, 10N	2700 MPa	EN ISO 604
110	11.43				
120	13.63	Impact Strength (Charpy)	max. 7.5J	n.b kJ/m ²	DIN EN ISO 179-1eU
125	14.76				
130	16.00	Notched Impact Strength (Charpy)	max 7.5J	7 kJ/m ²	DIN EN ISO 179-1eA
135	17.23				
140	18.51	Ball Indentation Hardness		155 MPa	ISO 2039-1
150	21.27				
		Other properties			
		Property	Parameter	Value	Norm
160	24.20	Water absorption	24h / 96h (23 oC)	0.3 / 0.6 %	DIN EN ISO 62
165	25.80				
180	30.60	Resistance to hot water/bases		(+)	-
200	37.80	Resistance to weathering		-	-
210	41.60	Flamability (UL94)	corresponding to	HB	DIN IEC 60695-11-10
220	45.60				
		Thermal Properties			

		Property	Parameter	Value	Norm
230	49.90				
250	58.90	Glass transition temperature		45 oC	DIN 53765
		Melting temperature		221 oC	DIN 53765
		Service temperature	short term	160 oC	
		Service temperature	long term	100 oC	
		Thermal expansion (CLTE)	23-60 oC, long	12	

Disclaimer

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