

Engineering Plastics - Nylon 66

Rod

Properties

Stock		Electrical Properties			
Dia (mm)	Weight (kg/m)	Property	Parameter	Value	Norm
4	0.17	Specific Surface Resistance		10 ¹⁴ Ω	DIN IEC 60093
5	0.026	Specific Volume Resistance		10 ¹⁴ Ω*cm	DIN IEC 60093
6	0.037	Mechanical Properties			
8	0.065	Property	Parameter	Value	Norm
10	0.100				
12	0.144	Modulus of Elasticity (tensile test)	1mm/min	3500 MPa	DIN EN ISO 527-2
14	0.194				
15	0.221	Tensile Strength	50mm/min	85 MPa	DIN EN ISO 572-2
16	0.251				
18	0.315	Tensile Strength at Yield	50mm/min	84 MPa	DIN EN ISO 527-2
20	0.387				
22	0.471	Elongation at Yield	50mm/min	7%	DIN EN ISO 527-2
25	0.604				
28	0.754	Elongation at Break	50mm/min	70%	DIN EN ISO 527-2
30	0.863				
32	0.985	Flexural Strength	2mm/min, 10N	110 MPa	DIN EN ISO 178
36	1.24				
40	1.53	Modulus of Elasticity	2mm/min, 10N	3100 MPa	DIN EN ISO 178
45	1.93	Compression Strength	1% / 2% 5mm/min, 10N	20 / 35 MPa	EN ISO 604
50	2.38	Compression Modulus	5mm/min, 10N	2700 MPa	EN ISO 604
56	2.97	Impact Strength (Charpy)	max. 7.5J	n.b kJ/m ²	DIN EN ISO 179-1eU
60	3.42				
65	4.01	Notched Impact Strength (Charpy)	max 7.5J	5 kJ/m ²	DIN EN ISO 179-1eA
70	4.64				
75	5.35	Ball Indentation Hardness		175 MPa	ISO 2039-1
80	6.07	Other properties			
85	6.87	Property	Parameter	Value	Norm
90	7.69				
100	9.50	Water absorption	24h / 96h (23°C)	0.2 / 0.4 %	DIN EN ISO 62
110	11.53				
120	13.75	Resistance to hot water/bases		(+)	-
125	14.89	Resistance to weathering		-	-
130	16.14	Flamability (UL94)	corresponding to	HB	DIN IEC 60695-11-10
135	17.38				
140	18.67	Thermal Properties			
150	21.45	Property	Parameter	Value	Norm
160	24.40				
165	26.00	Glass Transition Temperature		47 °C	DIN 53765
180	30.90	Melting Temperature		258 °C	DIN 53765
200	38.10	Service Temperature	short term	170 °C	
		Service Temperature	long term	100 °C	
		Thermal Expansion (CLTE)	23-60°C, long	11 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		1.5 J/(g*K)	ISO 22007-4:2008
Thermal Conductivity		0.36 W/(K*m)	ISO 22007-4:2008

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