

Engineering Plastics - PETP

Rod

Properties

Stock		Electrical Properties			
Dia (mm)	Weight (kg/m)	Property	Parameter	Value	Norm
10	0.118	Specific Surface Resistance		10 ¹⁴ Ω	DIN IEC 60093
12	0.170	Specific Volume Resistance		10 ¹⁴ Ω	DIN IEC 60093
14	0.229				
15	0.262				
		Mechanical Properties			
16	0.297	Property	Parameter	Value	Norm
18	0.373	Modulus of Elasticity (tensile test)	1mm/min	3400 MPa	DIN EN ISO 527-2
20	0.458				
22	0.556	Tensile Strength	50mm/min	91 MPa	DIN EN ISO 572-2
25	0.714				
28	0.891	Tensile Strength at Yield	50mm/min	91 MPa	DIN EN ISO 527-2
30	1.02				
32	1.16	Elongation at Yield	50mm/min	4%	DIN EN ISO 527-2
36	1.47	Elongation at Break	50mm/min	15%	DIN EN ISO 527-2
40	1.80				
45	2.29	Flexural Strength	2mm/min, 10N	134 MPa	DIN EN ISO 178
50	2.81				
56	3.52	Modulus of Elasticity	2mm/min, 10N	3400 MPa	DIN EN ISO 178
60	4.05	Compression Strength	1% / 2% 5mm/min, 10N	19 / 36 MPa	EN ISO 604
65	4.74				
70	5.48	Compression Modulus	5mm/min, 10N	2800 MPa	EN ISO 604
75	6.33				
80	7.18	Impact Strength (Charpy)	max. 7.5J	27 kJ/m ²	DIN EN ISO 179-1eU
90	9.09	Ball Indentation Hardness		195 MPa	ISO 2039-1
100	11.24				
110	13.63				
		Other properties			
120	16.26	Property	Parameter	Value	Norm
125	17.61	Water absorption	24h / 96h (23°C)	0.02/0.03%	DIN EN ISO 62
130	19.08				
135	20.55	Resistance to hot water/bases		-	
140	22.08	Resistance to weathering		(+)	
150	25.40	Flamability (UL94)	corresponding to	HB	DIN IEC 60695-11-10
160	28.90				
165	30.80				
180	36.50				
		Thermal Properties			
		Property	Parameter	Value	Norm
		Glass Transition Temperature		81 °C	DIN 53765
		Melting Temperature		244 °C	DIN 53765
		Service Temperature	short term	170 °C	
		Service Temperature	long term	110 °C	
		Thermal Expansion (CLTE)	23-60°C, long	8 · 10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2
		Thermal Expansion (CLTE)	23-100°C, long	10 · 10 ⁻⁵ K ⁻¹	DIN EN ISO 11359-1;2

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