Engineering Plastics - Acetal

Rod

Stock

Dia (mm)	Weight (kg/m)
3	0.013
4	0.021
5	0.032
6	0.046
8	0.080
10	0.122
12	0.176
14	0.237
15	0.271
16	0.308
18	0.387
20	0.475
22	0.577
25	0.740
28	0.924
30	1.06
32	1.21
36	1.52
40	1.87
45	2.37
50	2.91
56	3.64
60	4.20
65	4.91
70	5.69
75	6.56
80	7.45
85	8.42
90	9.43
95	10.53
100	11.65
110	14.13
120	16.85
125	18.26
130	19.79
135	21.31
140	22.89
150	26.30
160	29.90
165	31.90
180	37.90
200	46.70

Properties

Electrical Properties

Property	Parameter	Value	Norm
Specific Surface Resistance	Silver electrode, 23°C, 12% r.h.	10^{14} Ω	DIN IEC 60093
Specific Volume Resistance	Silver electrode, 23°C, 12% r.h.	10^{14} Ω*cm	DIN IEC 60093
Dielectric Strength	23°C, 50% r.h.	38 kV/mm	ISO 60243-1
Resistance to Tracking (CTI)	Plain electrode, 23°C, 50% r.h., solvent A	600 V	DIN EN 60112

Mechanical Properties

Property	Parameter	Value	Norm
Modulus of Elasticity (tensile test)	1mm/min	2800 MPa	DIN EN ISO 527-2
Tensile Strength	50mm/min	67 MPa	DIN EN ISO 572-2
Tensile Strength at Yield	50mm/min	67 MPa	DIN EN ISO 527-2
Elongation at Yield	50mm/min	9%	DIN EN ISO 527-2
Elongation at Break	50mm/min	32%	DIN EN ISO 527-2
Flexural Strength	2mm/min, 10N	91 MPa	DIN EN ISO 178
Modulus of Elasticity	2mm/min, 10N	2600 MPa	DIN EN ISO 178
Compression Strength	1% / 2% 5mm/min, 10N	20 / 35 MPa	EN ISO 604
Compression Modulus	5mm/min, 10N	2300 MPa	EN ISO 604
Impact Strength (Charpy)	max. 7.5J	150 kJ/m^2	DIN EN ISO 179-1eU
Notched Impact Strength (Charpy)	max 7.5J	6 kJ/m^2	DIN EN ISO 179-1eA
Ball Indentation Hardness		165 MPa	ISO 2039-1

Other properties

Property	Parameter	Value	Norm
Water Absorption	24h / 96h (23 °C)	0.05/01 %	DIN EN ISO 62
Resistance to Hot Water/Bases		(+)	
Resistance to Weathering		(+)	
Flamability (UL94)	corresponding to	HB	DIN IEC 60695-11-10

210	51.50
230	61.80
250	72.80

Thermal Properties

Property	Parameter	Value	Norm
Glass Transition Temperature		-60 °C	DIN 53765
Melting Temperature		166 °C	DIN 53765
Service Temperature	short term	140 °C	
Service Temperature	long term	100 °C	
Thermal Expansion (CLTE)	23-60°C, long	13 10^{-5} K^{-1}	DIN EN ISO 11359-1;2
Thermal Expansion (CLTE)	23-100°C, long	14 10^{5} K^{-1}	DIN EN ISO 11359-1;2
Specific Heat		1.4 J/(g*K)	ISO 22007-4:2008
Thermal Conductivity		0.39 W/(K*m)	ISO 22007-4:2008

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