

## Material Data

### IMPACT

#### PA6C + Plasticiser

This grade was specifically developed for applications requiring high impact resistance. Over important characteristics are improved insensitivity against stresses, sharp edges, notches and scratches. It also exhibits improved noise reduction and great lead bearing capabilities.

PROPERTY	TEST METHOD	NOTES	METRIC UNITS		IMPERIAL UNITS	
<b>GENERAL</b>						
Colour					Grey	
Density	ISO1183:1987	Test Method A	g/cm <sup>3</sup>	1.110	lb/inch <sup>3</sup>	0.040
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	-	%	-
Water Absorption (24 Hours)	ISO 62:1999 (modified)	Immersion, 23C	%	-	%	-
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	-	%	-
<b>MECHANICAL</b>						
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	MPa	60 - 70	psi	8702 - 10153
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	MPa	3200	psi	471372
Elongation at break	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	%	>30	%	>30
Compressive Strength	ISO 604:2002	Sample Type B, 5mm min <sup>-1</sup>	MPa	120	psi	17405
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min <sup>-1</sup>	MPa	1800	psi	348090
Flexural Strength*	ISO 178:2001	1.5mm min <sup>-1</sup>	MPa	90	psi	13561
Flexural Modulus	ISO 178:2001	1.5mm min <sup>-1</sup>	MPa	2400	psi	348090
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	KJ/m <sup>2</sup>	10.00	ft.lb/in <sup>2</sup>	6.60
Charpy Impact Strength	ISO 179-2:1999	Notched	KJ/m <sup>2</sup>	-	ft.lb/in <sup>2</sup>	-
Hardness (Shore D)	ISO 868:2003	-	-	80	-	80
Coefficient of Friction (Dynamic)	-	31.4m/min, 1.75MPa	-	-	-	-
Limiting PV	-	-	MPa/m.min	-	psi.ft/min	-
Wear Rate	-	31.4m/min, 1.75MPa	mg/km	-	-	-
K-Factor	-	31.4m/min, 1.75MPa	mm <sup>3</sup> /Nm	3.5 x 10 <sup>-5</sup>	in <sup>3</sup> .min./ft.lb.hr	1.7 x 10 <sup>-4</sup>
<b>THERMAL</b>						
Melting Temperature	-	-	°C	220	°F	428
Glass Transition Temperature (Tg)	ISO 11359-2:1999	-	°C	60	°F	140
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	72	°F	162
Heat Deflection Temperature HDT/B	ISO 75	0.45MPa	°C	-	°F	-
Maximum Intermittent Service Temperature	-	-	°C	150	°F	302
Maximum Continuous Service Temperature	-	5000hrs	°C	90	°F	194
Minimum Intermittent Service Temperature	-	-	°C	-100	°F	-148
Minimum Continuous Service Temperature	-	-	°C	-40	°F	-40
Coefficient of Linear Thermal Expansion (TMA)	ISO 11359-2:1999	23°C - 55°C	°C <sup>-1</sup>	8.5 x 10 <sup>-5</sup>	°F <sup>-1</sup>	4.44 x 10 <sup>-5</sup>
Thermal Conductivity	ISO 8301:1991	Mean T = 20°C	W/m.°C	0.26	BTU in/ft.hr.°F	0.15
Flammability	IEC 60695-11-10:2003-08	-	-	HB	-	HB
<b>ELECTRICAL</b>						
Dielectric Constant	IEC 60250:1969-01	1MHz	-	3.7	-	3.7
Dielectric Constant (Low Frequency)	-	100Hz	-	4	-	4
Dissipation Factor	IEC 60250:1969-01	100Hz	Hz	-	Hz	-
Dielectric Strength	IEC 60243-1:1998-01	-	kV/mm	25	kV/in	635
Volume Resistivity	IEC 60093:1980-01	-	ohm.m	1 x 10 <sup>13</sup>	ohm.in	3.93 x 10 <sup>14</sup>
Surface Resistivity ROA	IEC 60093:1980-01	-	ohm	1 x 10 <sup>12</sup>	ohm	1 x 10 <sup>12</sup>
Comparative Tracking Index	IEC 60112:2003-01	-	CTI	600	CTI	600
<b>AVAILABILITY</b>						

ROD: 10 mm Ø → 500 mm Ø

PLATE: 8 mm = → 100 mm =

TUBE: 50 mm Ø → 1500 mm Ø

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