


# PA 66E

This grade is noted for its elevated mechanical strength, rigidity, abrasion and heat resistance. Its impact strength and vibration damping abilities are reduced when compared to PA 6, making this the preferred extruded grade for highly stressed, thermally loaded components.

PROPERTY	TEST METHOD	NOTES	METRIC UNITS		IMPERIAL UNITS	
<b>GENERAL</b>						
Colour				Natural / Black		Natural / Black
Density	ISO 1183:1987	Test Method A	g/cm <sup>3</sup>	1.145	lb/inch <sup>3</sup>	0.041
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	2.7	%	2.7
Water Absorption (24 Hours)	ISO 62:1999 (modified)	Immersion, 23C	%	0.30	%	-
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	8.50	%	8.50
<b>MECHANICAL</b>						
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	MPa	90	psi	11603
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	MPa	3700	psi	536641
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	90	psi	13053
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min <sup>-1</sup>	MPa	3200	psi	464122
Flexural Strength*	ISO 178:2001	1.5mm min <sup>-1</sup>	MPa	100	psi	14504
Flexural Modulus	ISO 178:2001	1.5mm min <sup>-1</sup>	MPa	3100	psi	449618
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	KJ/m <sup>2</sup>	5.70	ft.lb/in <sup>2</sup>	2.71
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		-	82	-	82
Coefficient of Friction (Dynamic)		31.4m/min, 1.75MPa	-	0.25	-	0.25
Limiting PV			MPa/m.min	6	psi.ft/min	2855
Wear Rate		31.4m/min, 1.75MPa	mg/km	-	-	-
K-Factor		31.4m/min, 1.75MPa	mm <sup>3</sup> /Nm	-	in <sup>3</sup> .min./ft.lb.hr	-
<b>THERMAL</b>						
Melting Temperature	-		°C	260	°F	500
Glass Transition Temperature (Tg)	ISO 11359-2:1999		°C	72	°F	162
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	100	°F	212
Heat Deflection Temperature HDT/B	ISO 75	0.45MPa	°C	205	°F	401
Maximum Intermittent Service Temperature	-		°C	170	°F	338
Maximum Continuous Service Temperature	-	5000hrs	°C	100	°F	212
Minimum Intermittent Service Temperature	-		°C	-	°F	-
Minimum Continuous Service Temperature	-		°C	-	°F	-
Coefficient of Linear Thermal Expansion (TMA)	ISO 11359-2:1999	23°C - 55°C	°C <sup>-1</sup>	10 x 10 <sup>-5</sup>	°F <sup>-1</sup>	5.55 x 10 <sup>-5</sup>
Thermal Conductivity	ISO 8301:1991	Mean T = 20°C	W/m.°C	0.23	BTU in/ft.hr.°F	0.13
Flammability	IEC 60695-11-10:2003-08		-	HB	-	HB
<b>ELECTRICAL</b>						
Dielectric Constant	IEC 60250:1969-01	1MHz	-	3.6	-	3.6
Dielectric Constant (Low Frequency)		100Hz	-	4.3	-	4.3
Dissipation Factor	IEC 60250:1969-01	100 Hz	Hz	0.024	Hz	0.024
Dielectric Strength	IEC 60243-1:1998-01		kV/mm	30.5	kV/in	774.7
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: 5mm - 150mm DIA		All information contained in this literature corresponds with our current knowledge of the products. Global EPP assume no liability whatsoever in respect of application, conversion or use made of the aforementioned information or products, or any consequence thereof. The buyer undertakes all liability in respect of the application, conversion or use of the aforementioned information or products. Existing intellectual property rights must be observed and Global EPP reserve the right to make technical alterations.				
PLATE: 6mm - 60mm THICK	