

This unmodified grade, produced by an anionic polymerisation casting process, demonstrates similar characteristics to PA 66 E. Cast products contain significantly lower stress levels combined with high strength, good creep resistance resulting in great dimensional accuracy when machining.

PROPERTY	TEST METHOD	NOTES	METRIC UNITS	IMPERIAL UNITS
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GENERAL

Colour	Natural Black					
Density	ISO1183:1997	Test Method A	g/cm ³	1.141	lb/inch ³	0.041
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	2.5	%	2.5
Water Absorption (24 Hours)	ISO 62:1999 (modified)	Immersion, 23C	%	0.3	%	0.3
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	7.0	%	7.0
FDA Compatibility		YES				

MECHANICAL

Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	MPa	75-80	psi	10877-11603
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	MPa	3400-3600	psi	493128-522135
Elongation at break	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	%	>20	%	>20
Compressive Strength	ISO 604:2002	Sample Type B, 5mm min ⁻¹	MPa	95-120	psi	13779-17404
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min ⁻¹	MPa	2100-2700	psi	304579-391603
Flexural Strength*	ISO 178:2001	1.5mm min ⁻¹	MPa	105-125	psi	15229-18129
Flexural Modulus	ISO 178:2001	1.5mm min ⁻¹	MPa	3300-3600	psi	478626-522135
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	KJ/m ²	4.5-6	ft.lb/in ²	2.14-2.86
Charpy Impact Strength	ISO 179-2:1999	Notched	KJ/m ²	-	ft.lb/in ²	-
Hardness (Shore D)	ISO 868:2003	-	-	83	-	83
Coefficient of Friction (Dynamic)	-	31.4m/min, 1.75MPa	-	0.160	-	0.19
Limiting PV	-	-	MPa/m.min	100	psi.ft/min	-
Wear Rate	-	31.4m/min, 1.75MPa	mg/km	0.11	-	-
K-Factor	-	31.4m/min, 1.75MPa	mm ³ /Nm	4.3x 10 ⁻⁵	in ³ .min./ft.lb.hr	1.0 x 10 ⁻⁴

THERMAL

Melting Temperature	-	-	°C	223	°F	432
Glass Transition Temperature (Tg)	ISO 11359-2:1999	-	°C	65	°F	149
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	75	°F	176
Heat Deflection Temperature HDT/B	ISO 75	0.45MPa	°C	-	°F	-
Maximum Intermittent Service Temperature	-	-	°C	170	°F	338
Maximum Continuous Service Temperature	-	5000hrs	°C	100	°F	230
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 ⁻¹	8 x 10 ⁻⁵	°F ⁻¹	0.44 x 10 ⁻⁵
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

ELECTRICAL

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	0.02	Hz	0.02
Dielectric Strength	IEC 60243-1:1998-01	-	kV/mm	25	kV/in	635
Volume Resistivity	IEC 60093:1980-01	-	ohm.m	>1 x 10 ¹³	ohm.in	3.93 x 10 ¹⁴
Surface Resistivity ROA	IEC 60093:1980-01	-	ohm	>1 x 10 ¹²	ohm	1 x 10 ¹²
Comparative Tracking Index	IEC 60112:2003-01	-	CTI	600	CTI	600

AVAILABILITY



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