

Nylacast PA6 C

PROPERTY	TEST METHOD	NOTES	METRIC	UNITS	IMPERIAL	UNITS
GENERAL						
Colour				Natural/ Black/ Other		Natural/ Black/ Other
Density	ISO1183:1987	Test Method A	g/cm ³	1.145	lb/inch ³	0.041
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	-	%	-
Water Absorption (24 Hours)	ISO 62:1999(modified)	Immersion, 23C	%	0.30	%	0.30
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	7.00	%	7.00
MECHANICAL						
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	MPa	80	psi	11603
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	MPa	4000	psi	580152
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	psi	13779
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min ⁻¹	MPa	2700	psi	391603
Flexural Strength*	ISO 178:2001	1.5mm min ⁻¹	MPa	105	psi	15229
Flexural Modulus	ISO 178:2001	1.5mm min ⁻¹	MPa	3300	psi	478626
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	kJ/m ²	5.60	ft.lb/in ²	2.66
Charpy Impact Strength	ISO 179-2:1999	Notched	kJ/m ²	-	ft.lb/in ²	-
Hardness (Shore D)	ISO 868: 2003			84		84
Coefficient of Friction (Dynamic)		31.4m/min, 1.75MPa		0.39		0.39
Limiting PV			Mpa/m. min	-	psi.ft/min	-
Wear Rate		31.4m/min, 1.75MPa	mg/km	0.44		-
K-Factor		31.4m/min, 1.75MPa	mm ³ /Nm	5.0 x 10 ⁻⁶	in ³ min/ ft.lb.hr	2.4 x 10 ⁻⁹
THERMAL						
Melting Temperature	-		°C	220	°F	428
Glass Transition Temperature (Tg)	ISO 11359-2:1999		°C	-	°F	-
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	-	°F	-
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	212
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	4.44 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	1 MHz		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	1x10 ¹³	ohm.m	3.93x10 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

PRODUCT AVAILABILITY

Rod	10mm-500mm DIA
Tube	50mm-1000mm OD
Plate	8mm-100mm THICKNESS
Custom Castings	Bespoke
Cut to size	Available upon request

NOTES

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