

NYLACAST PA 6 NATURAL

PROPERTY	TEST METHOD	NOTES	METRIC	UNITS	IMPERIAL	UNITS
GENERAL						
Colour	-	-	-	Natural, Black	-	Natural, Black
Density	ISO 1183:1997	Test Method A	g/cm ³	1.141	lb/inchE3	0.042
Moisture Absorption (Equilibrium)	ISO 62:1999 (modified)	50% RH, 23°C	%	2.5	%	2.5
Water Absorption @24 hrs	ISO 62:1999 (modified)	Immersion @ 23°C	%	0.3	%	0.3
Water Absorption @24 hrs Saturation	ISO 62:1999	Immersion @ 23°C	%	7	%	7
MECHANICAL						
Tensile Strength at Yield	ISO 527-1/2:1993	Sample Type 1B, 50mm/min	MPa	75-80	psi	11.6k
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm/min	MPa	3400-3600	psi	580k
Elongation at Break	ISO 527-1/2:1993	Sample Type 1B, 50mm/min	%	>20	%	>20
Compressive Strength	ISO 604:2002	Sample Type B, 5mm/min	MPa	95-120	psi	13.8k
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm/min	MPa	2100-2700	psi	392k
Flexural Strength	ISO 178:2001	1.5mm/min	MPa	105-125	psi	15.3k
Flexural Modulus	ISO 178:2001	1.5mm/min	MPa	3300-3600	psi	478k
Izod Impact Strength	ISO 180:2000	Sample Type A (notched)	kJ/mm ²	4.5-6.0	ft.lb/inE2	2.9
Dynamic Coefficient of Friction	-	31.4m/min, 1.75MPa	-	0.16	-	0.16
Limiting PV	-	-	MPa/m	100	psi.ft/min	2.9k
K-Factor (wear factor)	-	31.4m/min, 1.75MPa	mm ³ /Nm	4.3x10E-5	-	2.4x10E4
Hardness (Shore D)	ISO 868: 2003	Scale D	Shore D	83	Shore D	83
THERMAL						
Melting Temperature, Tg	-	-	°C	223	°F	433
Glass Transition Temperature	ISO 11359:1999	-	°C	65	°F	149
Heat Deflection Temperature, HDT/A	ISO 75	1.80MPa	°C	75	°F	167
Maximum/Minimum Continuous Service Temperatures	-	-	°C	100/-40	°F	212/-40
Maximum/Minimum Intermittent Service Temperatures	-	-	°C	170/-100	°F	338/-148
Coefficient of Linear Thermal Expansion	ISO 11359-2:1999	23-55°C	°C ⁻¹	8x10E-5	°F.E-1	4.4x10E-5
Thermal Conductivity	ISO 8301:1991	Mean T = 20°C	W/moC	0.26	°F	0.15
Flammability	IEC 60695-11-10:2003-08	-	-	HB	-	HB
ELECTRICAL						
Dielectric Constant	IEC 60250:1969-01	1 & 100 Hz	-	3.7 & 4	-	3.7 & 4
Dissipation Factor	IEC 60250:1969-01	100 Hz	-	0.02	-	0.02
Dielectric Strength	IEC 60243:-1:1998-01	-	kV/m	25	kV/in	635
Volume Resistivity	IEC 60093:1980-01	-	ohm.m	>1x10E13	ohm.m	4x10E14
Surface Resistivity	IEC 60093:1980-01	-	ohm.m	>1x10E12	ohm.m	>1x10E12
Comparative Tracking Index	IEC 60112:2003-01	-	CTI	600	CTI	600
FDA Compatibility						
				YES		YES

PRODUCT AVAILABILITY		NOTES
Rod	10mm-500mm DIA	<ul style="list-style-type: none"> All information contained in this literature correspond with our current knowledge of the products. Nylacast assume no liability whatsoever in respect of application, conversion or use made of the aforementioned information or product, or any consequence thereof. The buyer undertakes all liability in respect of the application, conversion or use of the aforementioned information or product. Existing intellectual property rights must be observed and Nylacast reserve the right to make technical alterations.
Tube	50mm-1000mm OD	
Plate	6mm-100mm THICKNESS	
Custom Castings	Bespoke	
Cut to size	Available upon request	