

NYLACAST AQUANYL PA 612 C Copolymer

PROPERTY	TEST METHOD	NOTES	METRIC	UNITS	IMPERIAL	UNITS
GENERAL						
Colour	-	-	-	Natural/ Yellow	-	Natural/ Yellow
Density	ISO 1183:1997	Test Method A	g/cm ³	1.14	lb/inchE3	0.041
Moisture Absorption (Equilibrium)	ISO 62:1999 (modified)	50% RH, 23°C	%	1.8	%	1.8
Water Absorption @24 hrs	ISO 62:1999 (modified)	Immersion @ 23°C	%	0.15	%	0.15
Water Absorption @24 hrs Saturation	ISO 62:1999	Immersion @ 23°C	%	5	%	5
MECHANICAL						
Tensile Strength at Yield	ISO 527-1/2:1993	Sample Type 1B, 50mm/ min	MPa	74-78	psi	11.4k
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm/ min	MPa	3400-3700	psi	572k
Elongation at Break	ISO 527-1/2:1993	Sample Type 1B, 50mm/ min	%	>40	%	>40
Compressive Strength	ISO 604:2002	Sample Type B, 5mm/min	MPa	95-120	psi	13.1k
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm/min	MPa	2000-2200	psi	351k
Flexural Strength	ISO 178:2001	1.5mm/min	MPa	90-100	psi	13.9k
Flexural Modulus	ISO 178:2001	1.5mm/min	MPa	2700-3000	psi	395k
Izod Impact Strength	ISO 180:2000	Sample Type A (notched)	kJ/mm ²	6.0-7.0	ft.lb/inE2	3.6
Dynamic Coefficient of Friction	-	31.4m/min, 1.75MPa	-	0.188	-	0.188
Limiting PV	-	-	MPa/m	100	psi.ft/min	2.9k
K-Factor (wear factor)	-	31.4m/min, 1.75MPa	mm ³ /Nm	2.9X10E-5	-	1.4x10E4
Hardness (Shore D)	ISO 868: 2003	Scale D	Shore D	80	Shore D	80
THERMAL						
Melting Temperature, Tg	-	-	°C	216	°F	421
Glass Transition Temperature	ISO 11359:1999	-	°C	63	°F	145
Heat Deflection Temperature, HDT/A	ISO 75	1.80MPa	°C	75	°F	174
Maximum/Minimum Continuous Service Temperatures	-	-	°C	100/-40	°F	212/-40
Maximum/Minimum Intermittent Service Temperatures	-	-	°C	160/-100	°F	320/-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	0.16
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	-	0.04	-	0.04
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						
				NO		NO

PRODUCT AVAILABILITY

Rod	10mm-500mm DIA
Tube	50mm-1000mm OD
Plate	6mm-100mm THICKNESS
Custom Castings	Bespoke
Cut to size	Available upon request

NOTES

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