

OIL FILLED NYLON (OFN)

PROPERTY	TEST METHOD	NOTES	METRIC	UNITS	IMPERIAL	UNITS
GENERAL						
Colour	-	-	-	Yellow	-	Yellow
Density	ISO 1183:1987	Test Method A	g/cm ³	1.140	lb/inchE3	0.041
Water Absorption @24 hrs	ISO 62:1999 (modified)	Immersion @ 23°C	%	0.2	%	0.2
Water Absorption @24 hrs Saturation	ISO 62:1999	Immersion @ 23°C	%	5.0	%	5.0
MECHANICAL						
Tensile Strength at Yield	ISO 527-1/2:1993	Sample Type 1B, 50mm/min	MPa	75	psi	10878
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm/min	MPa	4000	psi	580152
Elongation at Break	ISO 527-1/2:1993	Sample Type 1B, 50mm/min	%	<25	%	<25
Compressive Strength	ISO 604:2002	Sample Type B, 5mm/min	MPa	95	psi	13779
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm/min	MPa	2500	psi	362595
Flexural Strength	ISO 178:2001	1.5mm/min	MPa	100	psi	14504
Flexural Modulus	ISO 178:2001	1.5mm/min	MPa	3100	psi	449618
Izod Impact Strength	ISO 180:2000	Sample Type A (notched)	kJ/mm ²	5.80	ft.lb/inE2	2.86
Dynamic Coefficient of Friction	-	31.4m/min, 1.75MPa	-	0.15	-	0.15
Wear Rate	-	31.4m/min, 1.75MPa	mg/km	0.11	-	-
K-Factor	-	31.4m/min, 1.75MPa	mm ³ /Nm	2.2x10 ⁻⁵	-	1.0x10 ⁻⁴
Hardness (Shore D)	ISO 868:2003			83		83
THERMAL						
Melting Temperature, Tg	-	-	°C	220	°F	428
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	105/-40	°F	221/-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	8x10 ⁻⁵	°F,E-1	4.4x10 ⁻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	1MHz	-	3.7	-	3.7
Dielectric Constant (Low Frequency)		100Hz	-	4	-	4
Dielectric Strength	IEC 60243:-1:1998-01	-	kV/m	25	kV/in	635
Volume Resistivity	IEC 60093:1980-01	-	ohm.m	1x10 ¹³	ohm.m	3.93x10 ¹⁴
Surface Resistivity	IEC 60093:1980-01	-	ohm.m	1x10 ¹²	ohm.m	1x10 ¹²
Comparative Tracking Index	IEC 60112:2003-01	-	CTI	600	CTI	600
FDA COMPATIBILITY						
FDA Compatibility				NO		NO

PRODUCT AVAILABILITY

Rod	10mm-500mm DIA
Tube	50mm-1500mm OD
Plate	8mm-100mm THICKNESS
Custom Castings	Bespoke
Cut to size	Available upon request

NOTES

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