

## Material Data

### WFN

#### PA6C + Wax

This supreme abrasion resistant grade contains a blended wax lubrication system, uniformly distributed to radically improve wear resistance and coefficient of friction characteristics. The material has excellent mechanical, thermal and electrical properties and exhibits outstanding pressure velocity capabilities. WFN is particularly suited to dry running bearing applications.

PROPERTY	TEST METHOD	NOTES	METRIC UNITS	IMPERIAL UNITS
<b>GENERAL</b>				
Colour				Red / Grey
Density	ISO1183:1987	Test Method A	g/cm <sup>3</sup>	1.145 lb/inch <sup>3</sup>
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	-
Water Absorption (24 Hours)	ISO 62:1999 (modified)	Immersion, 23C	%	0.3
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	5.0
<b>MECHANICAL</b>				
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	MPa	80 psi 11603
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	MPa	4000 psi 580152
Elongation at break	ISO 527-1/2:1993	Sample Type 1B, 50mm min <sup>-1</sup>	%	>20 % >20
Compressive Strength	ISO 604:2002	Sample Type B, 5mm min <sup>-1</sup>	MPa	95 psi 13779
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min <sup>-1</sup>	MPa	2600 psi 377099
Flexural Strength*	ISO 178:2001	1.5mm min <sup>-1</sup>	MPa	105 psi 15229
Flexural Modulus	ISO 178:2001	1.5mm min <sup>-1</sup>	MPa	3400 psi 493130
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	KJ/m <sup>2</sup>	6.00 ft.lb/in <sup>2</sup> 2.86
Charpy Impact Strength	ISO 179-2:1999	Notched	KJ/m <sup>2</sup>	- ft.lb/in <sup>2</sup> -
Hardness (Shore D)	ISO 868:2003	-	-	84 - 84
Coefficient of Friction (Dynamic)	-	31.4m/min, 1.75MPa	-	0.10 - 0.10
Limiting PV	-	-	MPa/m.min	- psi.ft/min -
Wear Rate	-	31.4m/min, 1.75MPa	mg/km	0.02 - -
K-Factor	-	31.4m/min, 1.75MPa	mm <sup>3</sup> /Nm	3.9 x 10 <sup>-6</sup> in <sup>3</sup> .min./ft.lb.hr 1.90 x 10 <sup>-4</sup>
<b>THERMAL</b>				
Melting Temperature	-	-	°C	220 °F 428
Glass Transition Temperature (Tg)	ISO 11359-2:1999	-	°C	65 °F 149
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	75 °F 167
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	105 °F 221
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 <sup>-1</sup>	8 x 10 <sup>-5</sup> °F <sup>-1</sup> 4.44 x 10 <sup>-5</sup>
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
<b>ELECTRICAL</b>				
Dielectric Constant	IEC 60250:1969-01	1MHz	-	3.7 - 3.7
Dielectric Constant (Low Frequency)	-	100Hz	-	4 - 4
Dissipation Factor	IEC 60250:1969-01	100 Hz	Hz	- Hz -
Dielectric Strength	IEC 60243-1:1998-01	-	kV/mm	25 kV/in 635
Volume Resistivity	IEC 60093:1980-01	-	ohm.m	1 x 10 <sup>13</sup> ohm.in 3.93 x 10 <sup>14</sup>
Surface Resistivity ROA	IEC 60093:1980-01	-	ohm	1 x 10 <sup>12</sup> ohm 1 x 10 <sup>12</sup>
Comparative Tracking Index	IEC 60112:2003-01	-	CTI	600 CTI 600
<b>AVAILABILITY</b>				




ROD: 10 mm Ø → 500 mm Ø 

PLATE: 8 mm = → 100 mm = 

TUBE: 50 mm Ø → 1500 mm Ø 

All information contained in this literature corresponds with our current knowledge of the products. Viva Nylons assume no liability whatsoever in respect of application, conversion or use made of the aforementioned information or products, or any consequence thereof. The buyer undertakes all liability in respect of the application, conversion or use of the aforementioned information or products. Existing intellectual property rights must be observed and Viva Nylons reserve the right to make technical alterations.