



OFN – PA 6C + Oil

Bay Plastics Datasheet

PROPERTY	TEST METHOD	NOTES	METRIC UNITS		IMPERIAL UNITS	
GENERAL						
Colour					Black Yellow	Black Yellow
Density	ISO 1183:1987 T	Test Method A	g/cm ³	1.140	lb/inch ³	0.041
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	-	%	-
Water Absorption (24 Hours)	ISO 62:1999 (modified)	Immersion, 23C	%	-	%	-
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	4	%	4
MECHANICAL						
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min ³	MPa	75	psi	10878
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min ³	MPa	3800	psi	551145
Elongation at break	ISO 527-1/2:1993	Sample Type 1B, 50mm min ³	%	>25	%	>25
Compressive Strength	ISO 604:2002	Sample Type B, 5mm min ³	MPa	95	psi	13779
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min ³	MPa	2400	psi	348091
Flexural Strength*	ISO 178:2001	1.5mm min ³	MPa	95	psi	13779
Flexural Modulus	ISO 178:2001	1.5mm min ³	MPa	3000	psi	435114
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	KJ/m ²	5.80	ft.lb/in ²	2.76
Charpy Impact Strength	ISO 179-2:1999	Notched	KJ/m ²	-	ft.lb/in ²	-
Hardness (Shore D)	ISO 868:2003		-	83	-	83
Coefficient of Friction (Dynamic)		31.4m/min, 1.75MPa	-	0.19	-	0.19
Limiting PV			MPa/m.min	-	psi.ft/min	-
Wear Rate		31.4m/min, 1.75MPa	mg/km	0.15	-	-
K-Factor		31.4m/min, 1.75MPa	mm ³ /Nm	1.70 x 10 ⁴	in ³ .min./ft.lb.hr	0.84 x 10 ⁴
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	-	5000hr	°C	110	°F	230
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 ⁻⁴	°F ⁻¹	4.44 x 10 ⁻⁴
Thermal Conductivity	ISO 8301:1991	Mean T = 20°C	W/m.°C	-	BTU in./ft.hr.°F	-
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
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 ¹⁴	ohm.in	3.93 x 10 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