

Material Data

MOLY

PA6C + MoS₂

MOLY allows for improved crystallization and a degree of self-lubrication through the addition of molybdenum disulphide. Hardness increases and simultaneously the general mechanical and anti-friction properties are improved.

PROPERTY	TEST METHOD	NOTES	METRIC UNITS		IMPERIAL UNITS	
GENERAL						
Colour					Black	
Density	ISO1183:1987	Test Method A	g/cm ³	1.150	lb/inch ³	0.042
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	-	%	-
Water Absorption (24 Hours)	ISO 62:1999 (modified)	Immersion, 23C	%	0.20	%	0.20
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	6	%	6
MECHANICAL						
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	MPa	85	psi	12328
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	MPa	4100	psi	594656
Elongation at break	ISO 527-1/2:1993	Sample Type 1B, 50mm min ⁻¹	%	>20	%	>20
Compressive Strength	ISO 604:2002	Sample Type B, 5mm min ⁻¹	MPa	105	psi	15229
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min ⁻¹	MPa	3000	psi	435114
Flexural Strength*	ISO 178:2001	1.5mm min ⁻¹	MPa	115	psi	16679
Flexural Modulus	ISO 178:2001	1.5mm min ⁻¹	MPa	3700	psi	536641
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	KJ/m ²	4.50	ft.lb/in ²	2.14
Charpy Impact Strength	ISO 179-2:1999	Notched	KJ/m ²	-	ft.lb/in ²	-
Hardness (Shore D)	ISO 868:2003	-	-	85	-	85
Coefficient of Friction (Dynamic)	-	31.4m/min, 1.75MPa	-	0.25	-	0.25
Limiting PV	-	-	MPa/m.min	-	psi.ft/min	-
Wear Rate	-	31.4m/min, 1.75MPa	mg/km	-	-	-
K-Factor	-	31.4m/min, 1.75MPa	mm ³ /Nm	2.2 x 10 ⁻⁵	in ³ .min/ft.lb.hr	1.1 x 10 ⁻⁴
THERMAL						
Melting Temperature	-	-	°C	220	°F	428
Glass Transition Temperature (Tg)	ISO 11359-2:1999	-	°C	68	°F	154
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	80	°F	176
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 ⁻¹	8 x 10 ⁻⁵	°F ⁻¹	4.44 x 10 ⁻⁵
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
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	100Hz	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 ¹³	ohm.in	3.93 x 10 ¹⁴
Surface Resistivity ROA	IEC 60093:1980-01	-	ohm	1x10 ¹²	ohm	1x10 ¹²
Comparative Tracking Index	IEC 60112:2003-01	-	CTI	600	CTI	600
AVAILABILITY						




ROD: 10 mm Ø → 500 mm Ø 

PLATE: 8 mm = → 100 mm = 

TUBE: 50 mm Ø → 1500 mm Ø 

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