POM H

Acetal Homopolymer

The homopolymer grade exhibits slightly higher mechanical properties illustrated in the hardness, rigidity and the creep resistance. The material also demonstrates elevated wear resistance and has a lower thermal expansion rate when compared to acetal copolymer.

PROPERTY	TEST METHOD	NOTES	METRIC UNITS		IMPERIAL UNITS	
GENERAL						
Colour				White / Black		White / Black
Density	ISO1183:1987	Test Method A	g/cm^3	1.410	$lb/inch^3$	0.051
Moisture Absorption (Equilibrium)	ISO 62:1999	50% RH, 23C	%	0.2	%	0.2
Water Absorption (24 Hours)	ISO 62:1999 (modified)	Immersion, 23C	%	0.21	%	0.21
Water Absorption (Saturation)	ISO 62:1999	Immersion, 23C	%	0.90	%	0.90
MECHANICAL						
Tensile strength	ISO 527-1/2:1993	Sample Type 1B, 50mm min^{-1}	MPa	80	psi	11603
E-modulus	ISO 527-1/2:1993	Sample Type 1B, 50mm min^{-1}	MPa	3500	psi	507633
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	130	psi	18855
Compressive Modulus	ISO 604:2002	Sample Type A, 1mm min^{-1}	MPa	3100	psi	449618
Flexural Strength*	ISO 178:2001	1.5mm min^{-1}	MPa	90	psi	13053
Flexural Modulus	ISO 178:2001	1.5mm min^{-1}	MPa	3100	psi	449618
Izod Impact Strength	ISO 180:2000	Sample Type A (Notched)	KJ/m^2	7.50	$ft.lb/in^2$	3.57
Charpy Impact Strength	ISO 179-2:1999	Notched	KJ/m^2	10.00	$ft.lb/in^2$	-
Hardness (Shore D)	ISO 868:2003		-	83	-	83
Coefficient of Friction (Dynamic)		31.4m/min, 1.75MPa	-	0.25	-	0.25
Limiting PV			MPa/m.min	6	psi.ft/min	2712
Wear Rate		31.4m/min, 1.75MPa	mg/km	-	-	-
K-Factor		31.4m/min, 1.75MPa	mm^3/Nm	-	$in^3.min./ft.lb.hr$	-
THERMAL						
Melting Temperature	-		°C	178	°F	352
Glass Transition Temperature (Tg)	ISO 11359-2:1999		°C	-60	°F	-76
Heat Deflection Temperature HDT/A	ISO 75	1.80MPa	°C	120	°F	248
Heat Deflection Temperature HDT/B	ISO 75	0.45MPa	°C	170	°F	338
Maximum Intermittent Service Temperature	-		°C	150	°F	302
Maximum Continuous Service Temperature	-	5000hrs	°C	110	°F	230
Minimum Intermittent Service Temperature	-		°C	-	°F	-
Minimum Continuous Service Temperature	-		°C	-50	°F	-58
Coefficient of Linear Thermal Expansion (TMA)	ISO 11359-2:1999	23°C - 55°C	$°C^{-1}$	9×10^{-5}	$°F^{-1}$	5.00×10^{-5}
Thermal Conductivity	ISO 8301:1991	Mean T = 20°C	W/m.°C	0.23	BTU in/ft.hr.°F	0.13
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	-	-	-	-
Dissipation Factor	IEC 60250:1969-01	100 Hz	Hz	0.005	Hz	0.005
Dielectric Strength	IEC 60243-1:1998-01		kV/mm	18	kV/in	457.2
Volume Resistivity	IEC 60093:1980-01		ohm.m	1×10^{13}	ohm.in	3.93×10^{12}
Surface Resistivity ROA	IEC 60093:1980-01		ohm	1×10^{13}	ohm	1×10^{13}
Comparative Tracking Index	IEC 60112:2003-01		CTI	600	CTI	600

AVAILABILTY

ROD: 5mm - 300mm DIA

PLATE: 6mm - 100mm THICK

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