

Nylacast POM C Acetal Copolymer

Category : Polymer , Thermoplastic , Acetal (POM) , Acetal Copolymer, Unreinforced

Material Notes:

The copolymer grade is the ideal combination of strength, stiffness and wears resistance. It absorbs very little moisture, is easily machinable and is genuinely porosity-free making it the preferred grade for food contact and medical applications. The product exhibits an elevated resistance to hydrolysis, strong alkalis and thermal-oxidative degradation when compared to acetal homopolymer. Information provided by Nylacast Ltd.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nylacast-POM-C-Acetal-Copolymer.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in ³	method A; ISO 1183:1987
Water Absorption	0.20 % @Time 86400 sec	0.20 % @Time 24.0 hour	Immersion; ISO 62:1999
Moisture Absorption at Equilibrium	0.10 %	0.10 %	50%RH; ISO 62:1999
Water Absorption at Saturation	0.90 %	0.90 %	Immersion; ISO 62:1999

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	85	85	ISO 868:2003
Tensile Strength, Yield	70.0 MPa	10200 psi	Type 1B, 50mm/min; ISO 527-1/2:1993
Elongation at Break	>= 15 %	>= 15 %	Type 1B, 50mm/min; ISO 527-1/2:1993
Tensile Modulus	2.70 GPa	392 ksi	Type 1B, 50mm/min; ISO 527-1/2:1993
Flexural Strength	80.0 MPa	11600 psi	1.5mm/min; ISO 178:2001
Flexural Modulus	2.60 GPa	377 ksi	1.5mm/min; ISO 178:2001
Compressive Strength	110 MPa	16000 psi	Type B, 5mm/min; ISO 604:2002
Compressive Modulus	2.60 GPa	377 ksi	Type B, 5mm/min; ISO 604:2002
Izod Impact, Notched (ISO)	7.20 kJ/m ²	3.43 ft-lb/in ²	Type A; ISO 180:2000
Coefficient of Friction, Dynamic	0.25 @Pressure 1.75 MPa	0.25 @Pressure 254 psi	31.4m/min
Limiting Pressure Velocity	0.100 MPa-m/sec @Pressure 1.75 MPa	2860 psi-ft/min @Pressure 254 psi	31.4 m/min

Thermal Properties	Metric	English	Comments
CTE, linear	92.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	51.1 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-2:1999
	@Temperature 23.0 - 55.0 $^{\circ}\text{C}$	@Temperature 73.4 - 131 $^{\circ}\text{F}$	
Thermal Conductivity	0.310 W/m-K	2.15 BTU-in/hr-ft ² - $^{\circ}\text{F}$	Mean T=20 $^{\circ}\text{C}$; ISO 8301:1991
Melting Point	170 $^{\circ}\text{C}$	338 $^{\circ}\text{F}$	
Maximum Service Temperature, Air	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	Intermittent
	90.0 $^{\circ}\text{C}$	194 $^{\circ}\text{F}$	Continuous
	@Time 1.80e+7 sec	@Time 5000 hour	
Deflection Temperature at 0.46 MPa (66 psi)	160 $^{\circ}\text{C}$	320 $^{\circ}\text{F}$	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	ISO 75
Glass Transition Temp, Tg	-60.0 $^{\circ}\text{C}$	-76.0 $^{\circ}\text{F}$	ISO 11359-2:1999
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	IEC 60093:1980-01
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	IEC 60093:1980-01
Dielectric Constant	3.8	3.8	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	16.5 kV/mm	419 kV/in	IEC 60243-1:1998-01
Dissipation Factor	0.0050	0.0050	IEC 60250:1969-01
	@Frequency 100 Hz	@Frequency 100 Hz	
Comparative Tracking Index	600 V	600 V	IEC 60112:2003-01

Descriptive Properties	Value	Comments
Color	White/Black/Blue	

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