Omnia Plastica Arnite Omnialite POM c Acetal Copolymer

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

Material Notes:

Polyoxymethylene, commonly called Acetal, is a crystalline polymer obtained from the polymerisation of formaldehyde. Discovered fairly recently (1960), it has enjoyed rapid growth and large acceptance thanks to it's excellent mechanical features, stability to humidity and ease of machining. All our stock shapes made of POM are marked along the whole length with product code and batch number, according to ISO 9002 standards.Features:High fatigue resistanceGood dimensional stabilityLow friction coefficientCompressive strength, shock resistance, even at low temperatureExcellent machinability especially used on automatic equipmentColour: natural and blackWeak Point:Compared to PA6 it has a lower abrasion resistance, particularly in dirty and dusty environments.Application:Mechanical: it is one of the most commonly used engineering plastics for mechanical applications such as bearings, cams, gears with low torque, gear wheels, conveyor rollers and precision machined components requiring dimensional stability and tight tolerances.Food contact: being physiologically inert it is suitable for food contact. It can be used in water at 80° C.Electrical: as it is not hygroscopic, it is commonly used for electric components such as insulators.Chemical: it is resistant to alkali and organic compounds. Thanks to its good chemical properties it is suitable for pump components, flanges and components for chemical plants.Information provided by Omnia Plastica s.p.a. for semifinished products such as sheet, rod, and tube.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Omnia-Plastica-Arnite-Omnialite-POM-c-Acetal-Copolymer.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in³	ISO.1183 DIN.53479
Moisture Absorption at Equilibrium	0.20 %	0.20 %	50% relative humidity
Water Absorption at Saturation	0.70 %	0.70 %	23°C

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	88	88	dry sample; ISO2039.2
Ball Indentation Hardness	140 MPa	20300 psi	ISO2039.1 DIN.53456
Tensile Strength at Break	66.0 MPa	9570 psi	ISO.527 DIN.53455
Elongation at Break	50 %	50 %	ISO.527 DIN.53455
Tensile Modulus	2.70 GPa	392 ksi	ISO.527 DIN.53455
Compressive Strength	14.0 MPa	2030 psi	1% strain over 1000 hours; ISO.899 DIN.53444
Charpy Impact Unnotched	NB	NB	7.5 J; ISO.R179 DIN.53453
Charpy Impact, Notched	0.900 J/cm²	4.28 ft-lb/in²	ISO179/3C DIN.53453
Coefficient of Friction, Dynamic	0.30	0.30	on dry ground steel; load =0.05MPa; speed =0.6 m/s

Thermal Properties	Metric	English	Comments
CTE, linear	110 µm/m-°C @Temperature 23.0 - 60.0 °C	61.1 µin/in-°F @Temperature 73.4 - 140 °F	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft²-°F	DIN.52612
Melting Point	165 °C	329 °F	
Maximum Service Temperature, Air	110 °C	230 °F	Maximum operating temperature continuously for 5000 hours based on a tensile stress of 50% at 23° C.
	140 °C	284 °F	short period, no load
Deflection Temperature at 1.8 MPa (264 psi)	115 °C	239 °F	ISO.75 DIN.53461
Minimum Service Temperature, Air	-50.0 °C	-58.0 °F	impact conditions and heavy loads not considered
Flammability, UL94	HB	HB	
Oxygen Index	15 %	15 %	ISO.4589

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ISO.93 DIN.53482
Dielectric Constant	3.8 @Frequency 1e+6 Hz	3.8 @Frequency 1e+6 Hz	ISO.250 DIN.53483
Dielectric Strength	50.0 kV/mm	1270 kV/in	ISO.243 DIN.53481
Dissipation Factor	0.010 @Frequency 1e+6 Hz	0.010 @Frequency 1e+6 Hz	ISO.250 DIN.53483

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