

Omnia Plastica Akulon® POM h Acetal Homopolymer

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

Material Notes:

The general features of homopolymer acetalic resin are similar to those of copolymer POM c, except that service temperature (under load) is slightly higher but resistance to hydrolysis and strong alkali is lower. Features: High fatigue resistance. Good dimensional stability. Low friction coefficient. High compressive strength. The shock resistance is good even at low temperature. Excellent machinability, especially on automatic equipment. Colour: natural. Weak Point: Compared to PA6 it has lower abrasion resistance, particularly in dirty and dusty environments. Compared to POM c. its resistance to hydrolysis is lower. Application: Mechanical: it is used for mechanical applications such as bearings, cams, gears with low torque, gear wheels, conveyor rollers and dimensionally stable precision parts. 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-Akulon-POM-h-Acetal-Homopolymer.php

Physical Properties	Metric	English	Comments
Density	1.42 g/cc	0.0513 lb/in ³	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	92	92	dry sample; ISO2039.2
Ball Indentation Hardness	150 MPa	21800 psi	ISO2039.1 DIN.53456
Tensile Strength at Break	69.0 MPa	10000 psi	ISO.527 DIN.53455
Elongation at Break	50 %	50 %	ISO.527 DIN.53455
Tensile Modulus	2.90 GPa	421 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	1.10 J/cm ²	5.24 ft-lb/in ²	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
--------------------	--------	---------	----------

Thermal Properties	Metric	English	Comments
CTE, linear	110 $\mu\text{m/m-}^\circ\text{C}$ @Temperature 23.0 - 60.0 $^\circ\text{C}$	61.1 $\mu\text{in/in-}^\circ\text{F}$ @Temperature 73.4 - 140 $^\circ\text{F}$	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft ² - $^\circ\text{F}$	DIN.52612
Melting Point	175 $^\circ\text{C}$	347 $^\circ\text{F}$	
Maximum Service Temperature, Air	100 $^\circ\text{C}$	212 $^\circ\text{F}$	Maximum operating temperature continuously for 5000 hours based on a tensile stress of 50% at 23 $^\circ\text{C}$.
	145 $^\circ\text{C}$	293 $^\circ\text{F}$	short period, no load
Deflection Temperature at 1.8 MPa (264 psi)	135 $^\circ\text{C}$	275 $^\circ\text{F}$	ISO.75 DIN.53461
Minimum Service Temperature, Air	-50.0 $^\circ\text{C}$	-58.0 $^\circ\text{F}$	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	3.7 @Frequency 1e+6 Hz	3.7 @Frequency 1e+6 Hz	ISO.250 DIN.53483
Dielectric Strength	32.0 kV/mm	813 kV/in	ISO.243 DIN.53481
Dissipation Factor	0.010 @Frequency 1e+6 Hz	0.010 @Frequency 1e+6 Hz	ISO.250 DIN.53483

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China