

Quantum Acetal-Homopolymer

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

Material Notes:

Information provided by Quantum Advanced Engineering Plastics

Order this product through the following link:

http://www.lookpolymers.com/polymer_Quantum-Acetal-Homopolymer.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.42 g/cc	1.42 g/cc	ASTM D792
Water Absorption	0.25 %	0.25 %	ASTM D570
Water Absorption at Saturation	0.90 %	0.90 %	ASTM D570

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	94	94	ASTM D785
Hardness, Rockwell R	121	121	ASTM D785
Hardness, Shore D	85	85	ASTM 2240
Tensile Strength	68.9 MPa	10000 psi	ASTM D638
Elongation at Break	40 %	40 %	ASTM D638
Tensile Modulus	3.10 GPa	450 ksi	ASTM D638
Flexural Strength	96.5 MPa	14000 psi	ASTM D790
Flexural Modulus	2.90 GPa	420 ksi	ASTM D790
Compressive Strength	110 MPa	16000 psi	ASTM D695
Compressive Modulus	3.10 GPa	450 ksi	ASTM D695
Shear Strength	62.1 MPa	9000 psi	ASTM D732
Izod Impact, Notched	0.641 J/cm	1.20 ft-lb/in	ASTM D256
Coefficient of Friction	0.20	0.20	

Thermal Properties	Metric	English	Comments
CTE, linear	99.0 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	55.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
Thermal Conductivity	0.360 W/m-K	2.50 BTU-in/hr-ft ² -°F	ASTM C177
Melting Point	175 °C	347 °F	ASTM D3417

Thermal Properties <small>Temperature, Air</small>	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	166 °C	330 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 °C	270 °F	ASTM D648
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Constant	3.5	3.5	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	19.7 kV/mm	500 kV/in	ASTM D149
Dissipation Factor	0.0048	0.0048	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Descriptive Properties	Value	Comments
FDA Compliance	yes	

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