

Network Polymers Kepital® F20-03

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

Material Notes:

Description: Natural Acetal Copolymer Information provided by Network Polymers Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Network-Polymers-Kepital-F20-03.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.41 g/cc	1.41 g/cc	ASTM D792
Moisture Absorption at Equilibrium	0.22 %	0.22 %	23°C at 60% RH; ASTM D570
Linear Mold Shrinkage	0.020 cm/cm	0.020 in/in	ASTM D955
Melt Flow	9.0 g/10 min @Load 2.16 kg, Temperature 190 °C	9.0 g/10 min @Load 4.76 lb, Temperature 374 °F	Procedure A Condition E; ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	80	80	ASTM D785
Tensile Strength at Break	61.4 MPa	8900 psi	ASTM D638
Elongation at Break	60 %	60 %	ASTM D638
Tensile Modulus	2.97 GPa	431 ksi	ASTM D638
Flexural Strength	90.3 MPa	13100 psi	ASTM D790
Flexural Modulus	2.61 GPa	379 ksi	ASTM D790
Poissons Ratio	0.35	0.35	
Shear Modulus	1.10 GPa	160 ksi	Calculated
Shear Strength	55.2 MPa	8000 psi	ASTM D732
Izod Impact, Notched	0.641 J/cm	1.20 ft-lb/in	ASTM D256
Izod Impact, Unnotched	>= 10.7 J/cm	>= 20.0 ft-lb/in	ASTM D256
Coefficient of Friction	0.13	0.13	Against Steel; Westover or Radial Type
	0.15	0.15	Against Aluminum; Westover or Radial Type
	0.15	0.15	Against Brass; Westover or Radial Type

Mechanical Properties	Metric	English	Comments
Taber Abrasion, mg/1000 Cycles	14	14	1 kg CS17 wheel; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear	130 $\mu\text{m/m-}^{\circ}\text{C}$ @Temperature 20.0 $^{\circ}\text{C}$	72.0 $\mu\text{in/in-}^{\circ}\text{F}$ @Temperature 68.0 $^{\circ}\text{F}$	ASTM D696
Melting Point	165 $^{\circ}\text{C}$	329 $^{\circ}\text{F}$	10 $^{\circ}\text{C/min}$ heating; DSC
Deflection Temperature at 0.46 MPa (66 psi)	158 $^{\circ}\text{C}$	316 $^{\circ}\text{F}$	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	110 $^{\circ}\text{C}$	230 $^{\circ}\text{F}$	ASTM D648
Vicat Softening Point	162 $^{\circ}\text{C}$	324 $^{\circ}\text{F}$	0.125 inch bar, 1 Kg; ASTM D1525
Flammability, UL94	HB	HB	0.00311 in

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	ASTM D257
Surface Resistance	1.00e+16 ohm	1.00e+16 ohm	ASTM D257
Dielectric Constant	3.7 @Frequency 100 Hz	3.7 @Frequency 100 Hz	ASTM D150
	3.7 @Frequency 1e+7 Hz	3.7 @Frequency 1e+7 Hz	ASTM D150
Dissipation Factor	0.0010 @Frequency 100 Hz	0.0010 @Frequency 100 Hz	ASTM D150
	0.0070 @Frequency 1e+6 Hz	0.0070 @Frequency 1e+6 Hz	ASTM D150
Arc Resistance	>= 200 sec	>= 200 sec	ASTM D495

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