

Kolon Kocetal® K700 General Purpose Grade Acetal Copolymer

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

Material Notes:

Thermal properties: Kocetal has excellent heat stability; heat degradation is little under long term and high temperature application, compared to other POM. Maximum applicable temperature of products of Kocetal are short term: 140-150C and long term: 100-120C.
Mechanical Properties: Kocetal is an engineering plastic that has excellent strength, stiffness and wear endurance. Also, it offers an excellent balance of several properties. For example, mechanical properties are stable in the practical temperature zone (-50C to 80C), compared to Nylon and PBT resins. Although it has slightly lower initial strength, compared to homopolymer, the long term properties of "elongation at break and impact strength" are superior.
Electrical Properties: Kocetal has excellent electrical properties. Its electrical properties, volume resistivity, dielectric constant, dissipation factor and dielectric strength change little with temperature. It also has a feature of good anti-pollution properties on electrical contact. Kocetal has such a permanent anti-static grade that can be applied to the specifics.
Chemical Properties: Kocetal has excellent chemical resistance to organic chemicals, oils, fats and detergents. It is also strongly resistant to inorganic chemicals except strong acids.
 Information provided by US distributor, API-Kolon.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Kolon-Kocetal-K700-General-Purpose-Grade-Acetal-Copolymer.php

Physical Properties	Metric	English	Comments
Density	1.41 g/cc	0.0509 lb/in ³	ASTM D790
Water Absorption	0.22 %	0.22 %	ASTM D570
Linear Mold Shrinkage	0.020 cm/cm	0.020 in/in	ASTM D955
Melt Flow	27 g/10 min	27 g/10 min	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	80	80	ASTM D785
Tensile Strength, Ultimate	64.7 MPa	9390 psi	ASTM D638
Elongation at Break	45 %	45 %	ASTM D638
Flexural Yield Strength	97.1 MPa	14100 psi	ASTM D790
Flexural Modulus	2.70 GPa	391 ksi	ASTM D790
Izod Impact, Notched	0.549 J/cm	1.03 ft-lb/in	ASTM D256
Coefficient of Friction	0.22	0.22	ASTM D1894

Thermal Properties	Metric	English	Comments
CTE, linear	110 - 130 Åµm/m-Å°C @Temperature 20.0	61.1 - 72.2 Åµin/in-Å°F @Temperature 68.0 Å°F	ASTM D696

Thermal Properties	°C Metric	English	Comments
Melting Point	166 °C	331 °F	ASTM D1525
Maximum Service Temperature, Air	100 - 120 °C	212 - 248 °F	Long Term
	140 - 150 °C	284 - 302 °F	Short Term
Deflection Temperature at 0.46 MPa (66 psi)	158 °C	316 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	110 °C	230 °F	ASTM D648
Vicat Softening Point	162 °C	324 °F	ASTM D1525
Flammability, UL94	HB	HB	

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	3.7	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	19.0 kV/mm	483 kV/in	ASTM D149
Dissipation Factor	0.0060	0.0060	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Arc Resistance	>= 200 sec	>= 200 sec	ASTM D495

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	160 - 180 °C	320 - 356 °F	
Middle Barrel Temperature	182 - 200 °C	359 - 392 °F	
Front Barrel Temperature	190 - 210 °C	374 - 410 °F	
Nozzle Temperature	190 - 210 °C	374 - 410 °F	
Melt Temperature	166 °C	330 °F	
Mold Temperature	60.0 - 100 °C	140 - 212 °F	Surface
Drying Temperature	80.0 °C	176 °F	
Dry Time	3 hour	3 hour	
Injection Pressure	68.6 - 108 MPa	9950 - 15600 psi	

Processing Properties	Metric	English	Comments
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