

Polyplastics TOPAS® 8007 Cyclic Olefin Copolymer (COC) (Asia/Pacific Grade)

Category : Polymer , Thermoplastic , Cyclo Olefin Polymer

Material Notes:

Water adsorption is small and barrier properties are good, making this grade particularly suitable for package applications for products that dislike moisture. Grade 8007 has lower coefficient of elasticity and larger elongation compared with other TOPAS® COC grades. Information provided by PolyPlastics.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polyplastics-TOPAS-8007-Cyclic-Olefin-Copolymer-COC-AsiaPacific-Grade.php

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in ³	ISO 1183
Water Absorption	0.010 %	0.010 %	immersion @23°C; ISO 62
Water Vapor Transmission	0.0230 g/m ² /day	0.00148 g/100 in ² /day	[g·mm/m²·d] @ 23°C and 85% RH; DIN 53122
	0.250 g/m ² /day	0.0161 g/100 in ² /day	Good barrier properties
Melt Flow	2.0 g/10 min	2.0 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 245 °C	@Load 4.76 lb, Temperature 473 °F	
	33 g/10 min	33 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 260 °C	@Load 4.76 lb, Temperature 500 °F	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	63.0 MPa	9140 psi	50mm/min; ISO 527-1, 2
Elongation at Break	4.5 %	4.5 %	50mm/min; ISO 527-1, 2
Tensile Modulus	2.60 GPa	377 ksi	1mm/min; ISO 527-1, 2
Charpy Impact Unnotched	2.00 J/cm ²	9.52 ft·lb/in ²	ISO 179/1eU
Charpy Impact, Notched	0.260 J/cm ²	1.24 ft·lb/in ²	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	75.0 °C	167 °F	
Deflection Temperature at 1.8 MPa (264 psi)	68.0 °C	154 °F	ISO 75-1, 2
Glass Transition Temp, Tg	80.0 °C	176 °F	

Optical Properties	Metric	English	Comments
Refractive Index	1.53	1.53	
Transmission, Visible	91 %	91 %	ISO 13468-1

Electrical Properties	Metric	English	Comments
Dielectric Constant	2.2	2.2	
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	
Dissipation Factor	0.00010	0.00010	
	@Frequency 1.00e+10 Hz	@Frequency 1.00e+10 Hz	

Descriptive Properties	Value	Comments
Pencil Hardness	HB	JIS K5401
Resistance to Acids	Usable	
Resistance to Alcohols	Usable	
Resistance to Alkalis	Usable	
Resistance to Aromatic Solvents	Not Usable	
Resistance to Chlorinated Solvents	Not Usable	
Resistance to Esters	Usable	
Resistance to Gasoline	Not Usable	
Resistance to Ketones	Usable	
Resistance to Oils	Not Usable	

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