

Topas Advanced Polymers TOPAS® 8007X10 Cyclic Olefin Copolymer (COC)

Category : Polymer , Thermoplastic , Cyclo Olefin Polymer

Material Notes:

TOPAS® 8007X10 is a highly UV-transparent version of our 8007 series of injection molding resins. Like the rest of the 8007 grades, 8007X10 is a glass-clear amorphous polymer with outstanding moisture barrier, chemical resistance, high purity and a non-reactive surface making it an excellent choice for diagnostic and analytical products. It transmits ultraviolet light at lower wavelengths than other polymers. Analytical results are more accurate with pure TOPAS COC and its higher UV transmission for more precise analysis in contact with sensitive chemistries. Key applications and attributes: Cuvettes: UV transparency at low wavelengths Microplates and biochips: Dimensional stability and purity and chemical resistance Microfluidics: UV transmission; exceptional mold detail replication Optics: Clarity, low birefringence, low fluorescence High purity applications: Not manufactured with BPA, phthalates, or halogens Information provided by TOPAS Advanced Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_Topas-Advanced-Polymers-TOPAS-8007X10-Cyclic-Olefin-Copolymer-COC.php

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in ³	ISO 1183
Water Absorption at Saturation	0.010 % @Temperature 23.0 °C	0.010 % @Temperature 73.4 °F	ISO 62
Melt Flow	29.4 g/10 min @Load 2.16 kg, Temperature 260 °C	29.4 g/10 min @Load 4.76 lb, Temperature 500 °F	ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	63.0 MPa	9140 psi	50mm/min; ISO 527-2/1A
Elongation at Yield	4.5 %	4.5 %	50mm/min; ISO 527-2/1A
Tensile Modulus	2.60 GPa	377 ksi	1mm/min; ISO 527-2/1A
Charpy Impact Unnotched	2.00 J/cm ² @Temperature 23.0 °C	9.52 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.260 J/cm ² @Temperature 23.0 °C	1.24 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	75.0 °C	167 °F	ISO 75-1,-2
Vicat Softening Point	80.0 °C	176 °F	B50 (50°C/h 50N); ISO 306

Thermal Properties	Metric	English	Comments
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.53	1.53	ISO 489
Transmission, Visible	91 %	91 %	ISO 13468-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+16 ohm-cm	>= 1.00e+16 ohm-cm	IEC 60093
Dielectric Constant	2.35	2.35	
	@Frequency 1000 - 10000 Hz	@Frequency 1000 - 10000 Hz	IEC 60250
Comparative Tracking Index	>= 600 V	>= 600 V	IEC 60112

Processing Properties	Metric	English	Comments
Feed Temperature	<= 60.0 °C	<= 140 °F	
Nozzle Temperature	220 - 250 °C	428 - 482 °F	
Zone 1	190 - 220 °C	374 - 428 °F	
Zone 2	200 - 230 °C	392 - 446 °F	
Zone 3	210 - 240 °C	410 - 464 °F	
Zone 4	220 - 250 °C	428 - 482 °F	
Mold Temperature	40.0 - 70.0 °C	104 - 158 °F	
Injection Velocity	50.0 - 150 mm/sec	1.97 - 5.91 in/sec	Moderate to Fast
Injection Pressure	50.0 - 110 MPa	7250 - 16000 psi	Specific
Hold Pressure	30.0 - 60.0 MPa	4350 - 8700 psi	Specific
Back Pressure	<= 15.0 MPa	<= 2180 psi	Specific
Screw Speed	50 - 200 rpm	50 - 200 rpm	

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