

Topas® 8007X10

Cyclic Olefin Copolymer

Topas Advanced Polymers, Inc.

Product Description

Injection molding grade with superior transparency in the UV range. Range of application: applications which require high UV-transparency, e.g. diagnostic applications (DNA analytics) with micro titer plates or cuvettes.

General

Forms	• Pellets
Processing Method	• Injection Molding

Physical	Nominal Value	Unit	Test Method
Density	1.02	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (260°C/2.16 kg)	32.0	cm ³ /10min	ISO 1133
Water Absorption (Saturation, 23°C)	0.010	%	ISO 62

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2600	MPa	ISO 527-2/1A/1
Tensile Stress (Yield)	63.0	MPa	ISO 527-2/1A/50
Tensile Strain (Yield)	4.5	%	ISO 527-2/1A/50

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	2.6	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength (23°C)	20	kJ/m ²	ISO 179/1eU

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature 0.45 MPa, Unannealed	75.0	°C	ISO 75-2/B
Glass Transition Temperature (DSC)	80.0	°C	DSC
Vicat Softening Temperature	80.0	°C	ISO 306/B50

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohm·cm	IEC 60093
Relative Permittivity 1 kHz	2.35		IEC 60250
10 kHz	2.35		
Comparative Tracking Index	600	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL (1.60 mm)	HB		UL 94

Optical	Nominal Value	Unit	Test Method
Refractive Index	1.530		ISO 489

Additional Information

Deg. of light transmission, ISO 13468-2: 91%

Injection	Nominal Value	Unit
Rear Temperature	190 to 220	°C
Middle Temperature	200 to 230	°C
Front Temperature	210 to 240	°C
Nozzle Temperature	220 to 250	°C
Processing (Melt) Temp	190 to 250	°C
Mold Temperature	40.0 to 70.0	°C
Injection Pressure	50.0 to 110	MPa
Injection Rate	Moderate-Fast	
Holding Pressure	30.0 to 60.0	MPa
Back Pressure	< 15.0	MPa
Screw Speed	50 to 200	rpm

