

TOPAS® 5013L-10

Injection molding grade for optical applications

Cyclic Olefin Copolymer (COC)

Property	Value	Unit	Test Standard
Physical Properties			
Density	1020	kg/m ³	ISO 1183
Melt volume rate (MVR)	48.0	cm ³ /10min	ISO 1133
MVR test temperature	260	°C	ISO 1133
MVR test load	2.16	kg	ISO 1133
Water absorption (23°C-sat)	0.01	%	ISO 62
Mechanical Properties			
Tensile modulus (1mm/min)	3200	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	46	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	1.7	%	ISO 527-2/1A
Charpy impact strength @ 23C	13	KJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	1.6	KJ/m ²	ISO 179/1eA
Thermal Properties			
Glass transition temperature (10°C/min)	134	°C	ISO 11357-1,-2,-3
DTUL @ 0.45 MPa	127	°C	ISO 75-1, -2
Electrical Properties			
Relative permittivity at 1-10 kHz	2.35	-	IEC 60250
Volume resistivity	>1E14	ohm·m	IEC 60093
Comparative tracking index CTI	>600	-	IEC 60112
Optical Properties			
Deg. of light transmission	91.4	%	ISO 13468-2
Refractive index	1.533	-	ISO 489

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