

# TECHNICAL DATA SHEET

[English Units]



## TOPAS® 5013S-04

Cyclic Olefin Copolymer (COC)

Injection molding grade with high flowability, high transparency, and high heat distortion temperature. Specially manufactured for optical applications also suited for applications where high flowability is required.

Property	Value	Unit	Test Standard
<b>Physical Properties</b>			
Density	1020	kg/m <sup>3</sup>	ISO 1183
Melt volume rate (MVR) (260°C, 2.16kg)	48	cm <sup>3</sup> /10min	ISO 1133
Melt flow rate (MFR) (260°C, 2.16kg)	43	g/10min	calculated
Water absorption (23°C-sat)	0,01	%	ISO 62
<b>Mechanical Properties</b>			
Tensile modulus (1mm/min)	460	kpsi	ISO 527-3
Tensile stress at break (5mm/min)	6700	psi	ISO 527-3
Tensile strain at break (5mm/min)	1,7	%	ISO 527-3
Charpy impact strength @ 23°C	6,2	ft-lbs/in <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength @ 23°C	0,8	ft-lbs/in <sup>2</sup>	ISO 179/1eA
<b>Thermal Properties</b>			
Glass transition temperature (10°C/min)	273	°F	ISO 11357-1,-2,-3
DTUL @ 0.45 MPa	261	°F	ISO 75-1, -2
Vicat softening temperature B50 (50°C/h 50N)	271	°F	ISO 306
Flammability @1.6mm nom. thickn.	HB	Class	UL94
<b>Electrical Properties</b>			
Relative permittivity at 1-10 kHz	2,35	-	IEC 60250
Volume resistivity	<1E14	ohm×m	IEC 60093
Comparative tracking index CTI	>600	-	IEC 60112
<b>Optical Properties</b>			
Deg. of light transmission	91,4	%	ISO 13468-2
Refractive index (589nm, 25°C)	1,533	-	ISO 489

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