



Optix® CP-81

Plaskolite, Inc. - Polymethyl Methacrylate Acrylic

Sunday, November 3, 2019

General Information

General

Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Additive	• Lubricant		
Features	• Chemical Resistant • Electrically Insulating • Good Dimensional Stability • Good Impact Resistance • Good Processability	• Good Weather Resistance • High Clarity • High Heat Resistance • High Molecular Weight • Low Flow	• Low Odor • Low to No Taste • Lubricated • Machinable
Appearance	• Colors Available		
Forms	• Pellets		
Processing Method	• Extrusion		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.19		ASTM D792
Melt Mass-Flow Rate (230°C/3.8 kg)	2.3	g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3	in/in	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	500000	psi	ASTM D638
Tensile Strength	9700	psi	ASTM D638
Tensile Elongation (Break)	4.0	%	ASTM D638
Flexural Modulus	424000	psi	ASTM D790
Flexural Strength	15700	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	0.40	ft-lb/in	ASTM D256
Unnotched Izod Impact	5.3	ft-lb/in	ASTM D256
Gardner Impact	3.00	in-lb	ASTM D3029
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	88		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 264 psi, Unannealed	208	°F	ASTM D648
Vicat Softening Temperature	225	°F	ASTM D1525
CLTE - Flow (-22 to 86°F)	3.4E-5	in/in/°F	ASTM D696
Flammability	Nominal Value	Unit	Test Method
Flame Rating	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.490		ASTM D542
Transmittance	92.0	%	ASTM D1003
Haze	1.00	%	ASTM D1003

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Additional Information

Thermal Index, UL-746 ABC: 90°C

Burn Rate, ASTM D635: 1.3 in/min

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	160 to 185	°F
Rear Temperature	400 to 480	°F
Middle Temperature	410 to 490	°F
Front Temperature	420 to 500	°F
Nozzle Temperature	410 to 500	°F
Processing (Melt) Temp	410 to 490	°F
Mold Temperature	120 to 200	°F

Injection Notes

Heated Manifold: 410-490°F

Heated Drop (Sprue): 410-490°F

Notes

¹ Typical properties: these are not to be construed as specifications.