

Optix® CP-51

Polymethyl Methacrylate Acrylic
Plaskolite West, Inc.

Message:

Optix® CP-51 is a polymethyl methacrylate-acrylic acid product. It can be processed by injection molding and is available in North America or Europe.
Features include:
flame retardant/rated flame
odorless/tasteless channel
Good processability
insulation
Good dimensional stability

General Information			
UL YellowCard	E167330-100061598	E357039-101308951	
Features	Good dimensional stability		
	Insulation		
	Impact resistance, good		
	Workability, good		
	Machinable		
	Medium liquidity		
	Good chemical resistance		
	Good weather resistance		
	Heat resistance, medium		
	The smell is low to none		
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	Definition, high		
	Medium molecular weight		
Appearance	Available colors		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	15	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.50	%	ASTM D955
Water Absorption (24 hr)	0.30	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	80		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2890	MPa	ASTM D638
Tensile Strength	55.8	MPa	ASTM D638
Tensile Elongation (Break)	2.6	%	ASTM D638

Flexural Modulus	2980	MPa	ASTM D790
Flexural Strength	86.9	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	21	J/m	ASTM D256
Unnotched Izod Impact	260	J/m	ASTM D256
Dart Drop Impact	0.339	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	75.6	°C	ASTM D648
Vicat Softening Temperature	93.9	°C	ASTM D1525
CLTE - Flow (-30 to 30°C)	6.6E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value		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	1.0	%	ASTM D1003
Additional Information			
Thermal Index, UL-746 ABC: 85°C Burn Rate, ASTM D635: 2.1 in/min			
Injection	Nominal Value	Unit	
Drying Temperature	65.6 - 73.9	°C	
Rear Temperature	199 - 243	°C	
Middle Temperature	204 - 249	°C	
Front Temperature	210 - 254	°C	
Nozzle Temperature	204 - 254	°C	
Processing (Melt) Temp	204 - 254	°C	
Mold Temperature	48.9 - 73.9	°C	
Injection instructions			
Heated Manifold: 400-480 °F Heated Drop (Sprue): 400-480 °F			

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