

Optix® CA-1000 IG

Polymethyl Methacrylate Acrylic

Plaskolite West, Inc.

Message:

Optix® CA-1000 IG is a Polymethyl Methacrylate Acrylic product. It can be processed by injection molding and is available in North America. Typical application: Medical/Healthcare.

Characteristics include:

- Flame Rated
- Good Weather Resistance
- Impact Resistant
- Insulating
- Sterilizable

General Information			
Features	Electrically Insulating		
	Good Impact Resistance		
	Good Weather Resistance		
	Machinable		
	Radiation Sterilizable		
Uses	Medical/Healthcare Applications		
Appearance	Clear/Transparent		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/3.8 kg)	2.8	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.20 to 0.70	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	35		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2030	MPa	ASTM D638
Tensile Strength (Yield)	42.0	MPa	ASTM D638
Tensile Elongation (Yield)	14	%	ASTM D638
Flexural Modulus	1790	MPa	ASTM D790
Flexural Strength (Yield)	61.6	MPa	ASTM D790
Compressive Strength	57.2	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	64	J/m	ASTM D256
Gardner Impact	5.88	J	ASTM D3029
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	77.8	°C	ASTM D648

Vicat Softening Temperature	108	°C	ASTM D1525
RTI Elec (1.50 mm)	90.0	°C	UL 746
RTI Imp (1.50 mm)	90.0	°C	UL 746
RTI Str (1.50 mm)	90.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength	15	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
1 kHz	3.26		
1 MHz	2.57		
Dissipation Factor			ASTM D150
1 kHz	0.038		
1 MHz	0.037		
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	HB		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.500		ASTM D542
Transmittance	90.8	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	73.9	°C	
Drying Time	2.0 to 4.0	hr	
Rear Temperature	177 to 232	°C	
Middle Temperature	193 to 249	°C	
Front Temperature	204 to 260	°C	
Nozzle Temperature	193 to 249	°C	
Processing (Melt) Temp	216 to 254	°C	
Mold Temperature	37.8 to 76.7	°C	
Injection Pressure	68.9 to 138	MPa	
Back Pressure	0.345 to 1.03	MPa	
Screw Speed	50 to 100	rpm	
Clamp Tonnage	14	kN/cm ²	

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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