

Optix® CA-51

Plaskolite-Continental Acrylics - Polymethyl Methacrylate

Product Description

Medium heat resistance, medium flow.

Product Characteristics

Material Status	<ul style="list-style-type: none"> Commercial: Active
Availability	<ul style="list-style-type: none"> North America
Test Standards Available	<ul style="list-style-type: none"> ASTM
Recycled Content	<ul style="list-style-type: none"> No
Features	<ul style="list-style-type: none"> Electrically Insulating Flow, Good Heat Resistance, High Machinable Resilient Weather Resistance, Good
Uses	<ul style="list-style-type: none"> Household Goods Optical Applications
Agency Ratings	<ul style="list-style-type: none"> FDA 21 CFR 177.1010 ¹
Appearance	<ul style="list-style-type: none"> Transparent Translucent Opaque
Forms	<ul style="list-style-type: none"> Pellets
Processing Method	<ul style="list-style-type: none"> Extrusion Injection Molding

Properties ²

Physical	Nominal Values (English)	Test Method
Density - Specific Gravity	1.19 sp gr 23/23°C	ASTM D792
Melt Flow Rate (230°C/3.8 kg - I)	15.0 g/10 min	ASTM D1238

Mechanical	Nominal Values (English)	Test Method
Tensile Modulus	419000 psi	ASTM D638
Tensile Strength @ Yield	8100 psi	ASTM D638
Tensile Elongation @ Yld	2.6 %	ASTM D638
Flexural Strength @ Yield	14800 psi	ASTM D790

Thermal	Nominal Values (English)	Test Method
DTUL @264psi - Unannealed	168 °F	ASTM D648
Vicat Softening Point	210 °F	ASTM D1525

Electrical	Nominal Values (English)	Test Method
Dielectric Strength	1000 V/mil	ASTM D149

Ignition Characteristics	Nominal Values (English)	Test Method
Flame Rating - UL (0.0590 in)	HB	UL 94

UL 746	Nominal Values (English)	Test Method
Rel Temp Indx Mech w/olmp (0.0590 in)	185 °F	UL 746
Rel Temp Indx Mech w/lmp (0.0590 in)	185 °F	UL 746
Rel Temp Indx Elect (0.0590 in)	185 °F	UL 746

Optical	Nominal Values (English)	Test Method
Transmittance	92.0 %	ASTM D1003

Processing Information

Injection Molding Parameters	Nominal Values (English)	Test Method
Drying Temperature	175 °F	
Drying Time	2.0 to 3.0 hr	
Suggested Max Moisture	0.10 %	
Rear Temperature	390 °F	
Middle Temperature	420 °F	

Front Temperature	420 °F
Nozzle Temperature	410 °F
Processing (Melt) Temp	440 to 450 °F
Mold Temperature	125 to 160 °F
Injection Pressure	10000 to 20000 psi
Back Pressure	50.0 to 200 psi
Screw L/D Ratio	20.0:1.0 to 24.0:1.0
Screw Compression Ratio	2.5:1.0 to 3.0:1.0

Notes

- ¹ When used unmodified for the manufacture of food contact articles, Optix® CA-51 will comply with Food Additive Regulations FDA 21 CFR 177.1010 under the U.S. Food, Drug and Cosmetic Act. Such uses are subject to good manufacturing practices and any other limitations which are part of the statute or regulations. These should be consulted for complete details.
- ² Typical properties; not to be construed as specifications.