Optix® CP-82

Plaskolite, Inc. - Polymethyl Methacrylate Acrylic

Sunday, November 3, 2019

General Information

General			
Material Status	• Commercial: Active		
Availability	• Europe	• North America	
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 • Machinable
Automotive Specifications	• CHRYSLER MS-DB-14 CPN1885 Color: UVT Clear • CHRYSLER MS-DB-14 CPN1911 Color: Clear • CHRYSLER MS-DB-14 CPN1913 Color: YL-90 Amber • CHRYSLER MS-DB-143 CPN1920 Color: Clear • CHRYSLER MS-DB-143 CPN1921 Color: RD-05 Red	• CHRYSLER MS-DB-143 CPN1922 Color: YL-90 Amber • CHRYSLER MS-DB-143 CPN1941 Color: RD-01 Red • CHRYSLER MS-DB-143 CPN2339 Color: Light Amber • CHRYSLER MS-DB-143 CPN3210 Color: Light Amber • CHRYSLER MS-DB-75 CPN4233 Color: Non-matched Color	• CHRYSLER MS-DB-75 CPN4234 Color: Non-matched Color • GM GMP.PMMA.006 • GM GMW16335P-PMMA-T3 • IMDS ID 503192773 • SAE J576
Appearance	• Colors Available		
Forms	• Pellets		
Processing Method	• Injection Molding		

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)	2.4	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	440000	psi	ASTM D638
Tensile Strength	9800	psi	ASTM D638
Tensile Elongation (Break)	3.4	%	ASTM D638
Flexural Modulus	426000	psi	ASTM D790
Flexural Strength	15300	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)	87		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	204	°F	
Vicat Softening Temperature	216	°F	ASTM D1525
CLTE - Flow (-22 to 86°F)	3.4E-5	in/in/°F	ASTM D696

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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

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.