WONDERLITE® PC-175

CHI MEI CORPORATION - Polycarbonate

Monday, November 4, 2019

General Information

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Uses	• Optical Data Storage		
RoHS Compliance	• RoHS Compliant		
Resin ID (ISO 1043)	• >PC<		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity [2]	1.20		ASTM D792
Density (73°F)	1.20	g/cm³	ISO 1183
Melt Mass-Flow Rate (300°C/1.2 kg)	62	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	65	cm³/10min	ISO 1133
Molding Shrinkage	0.50 to 0.70	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [3] (Yield)	8940	psi	ASTM D638
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Stress (Break)	7250	psi	ISO 527-2/50
Tensile Elongation [3] (Break)	70	%	ASTM D638
Tensile Strain (Break)	65	%	ISO 527-2/50
Flexural Modulus [4]	340000	psi	ASTM D790
Flexural Modulus [5]	348000	psi	ISO 178
Flexural Strength [4]	13000	psi	ASTM D790
Flexural Stress [5]	13100	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	4.8	ft·lb/in²	ISO 179
Notched Izod Impact Strength (73°F)	3.8	ft·lb/in²	ISO 180/1A
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	77		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	255	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	284	°F	ISO 75-2/A
Vicat Softening Temperature	302	°F	ASTM D1525 [6]
Vicat Softening Temperature			
--	293	°F	ISO 306/A50
--	284	°F	ISO 306/B50
CLTE - Flow	3.3E-5 to 4.4E-5	in/in/°F	ISO 11359-2

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	4.0	hr
Rear Temperature	554 to 608	°F
Middle Temperature	590 to 725	°F
Front Temperature	518 to 662	°F
Mold Temperature	113 to 262	°F

Notes

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

[2] 23°C

[3] 0.24 in/min

[4] 0.051 in/min

[5] 0.079 in/min

[6] Rate A (50°C/h), Loading 1 (10 N)