

WONDERLITE® PC-110L

Polycarbonate
CHI MEI CORPORATION

Message:

WONDERLITE® PC-110L is a Polycarbonate (PC) product. It can be processed by injection molding and is available in Africa & Middle East, Asia Pacific, Europe, Latin America, or North America. Typical application: Automotive.
Characteristics include:
Flame Rated
RoHS Compliant

General Information			
UL YellowCard	E56070-100239153		
Uses	Automotive Applications		
RoHS Compliance	RoHS Compliant		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	10.0	cm ³ /10min	ISO 1133
Molding Shrinkage			ASTM D955
Flow	0.50 to 0.70	%	
Across Flow	0.50 to 0.70	%	
Water Absorption (23°C, 24 hr)	0.20	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	77		ASTM D785
Ball Indentation Hardness (H 358/30)	100	MPa	ISO 2039-1
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			
Yield, 3.18 mm ¹	61.8	MPa	ASTM D638
Yield	65.0	MPa	ISO 527-2/50
Break	75.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield, 3.18 mm ²	6.0	%	ASTM D638
Break, 3.18 mm ³	110	%	ASTM D638
Break	120	%	ISO 527-2/50
Flexural Modulus			
6.35 mm ⁴	2350	MPa	ASTM D790
-- ⁵	2400	MPa	ISO 178
Flexural Strength			
6.35 mm ⁶	90.2	MPa	ASTM D790
-- ⁷	90.0	MPa	ISO 178

Compressive Strength	76.5	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	75	kJ/m ²	ISO 179
Notched Izod Impact			
3.18 mm	850	J/m	ASTM D256
--	80	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, Unannealed ⁸	136	°C	ASTM D648
1.8 MPa, Unannealed ⁹	125	°C	ASTM D648
1.8 MPa, Unannealed	127	°C	ISO 75-2/A
1.8 MPa, Annealed	142	°C	ISO 75-2/A
Vicat Softening Temperature			
--	150	°C	ASTM D1525 ¹⁰
--	148	°C	ISO 306/A50
--	143	°C	ISO 306/B50
CLTE - Flow (44 to 100°C)	6.0E-5 to 8.0E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.20	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	3.0E+16	ohms·cm	ASTM D257
Dielectric Strength (1.60 mm)	30	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	2.95		
1 MHz	2.90		
Dissipation Factor			ASTM D150
60 Hz	4.0E-4		
1 MHz	9.0E-3		
Arc Resistance ¹¹	110	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.50 mm)	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.585		ASTM D542
Transmittance (76200 µm)	88.0	%	ASTM D1003
Haze (81300 µm)	< 0.80	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	4.0	hr	
Rear Temperature	230 to 300	°C	
Middle Temperature	250 to 320	°C	
Front Temperature	250 to 310	°C	
Mold Temperature	70.0 to 120	°C	
NOTE			

1.	6.0 mm/min
2.	6.0 mm/min
3.	6.0 mm/min
4.	2.8 mm/min
5.	2.0 mm/min
6.	2.8 mm/min
7.	2.0 mm/min
8.	120°C/hr
9.	120°C/hr
10.	Rate A (50°C/h), Loading 1 (10 N)
11.	Tungsten Electrode

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