

Panlite® B-8120R

TEIJIN LIMITED - Polycarbonate

General Information

Product Description

Carbon fiber reinforced grades-20% Carbon fiber

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight		
Features	• Creep Resistant	• High Rigidity	
Uses	• Camera Applications	• Industrial Applications	
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.29	g/cm ³	ISO 1183
Molding Shrinkage			Internal Method
Across Flow : 4.00 mm	0.30 to 0.50	%	
Flow : 4.00 mm	0.020 to 0.20	%	
Water Absorption (24 hr, 23°C)	0.14	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	13600	MPa	ISO 527-2/1
Tensile Stress (Break)	130	MPa	ISO 527-2/5
Tensile Strain (Break)	1.5	%	ISO 527-2/5
Flexural Modulus ²	12000	MPa	ISO 178
Flexural Stress ²	185	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	7.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	25	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	149	°C	ISO 75-2/B
Heat Deflection Temperature (1.8 MPa, Unannealed)	147	°C	ISO 75-2/A
Vicat Softening Temperature	152	°C	ISO 306/B50
CLTE - Flow	2.0E-5	cm/cm/°C	ISO 11359-2
CLTE - Transverse	6.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec (1.5 mm)	80.0	°C	UL 746
RTI Imp (1.5 mm)	80.0	°C	UL 746
RTI Str (1.5 mm)	80.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0 to 1.0E+2	ohms	IEC 60093
Volume Resistivity	10 to 1.0E+3	ohms-cm	IEC 60093

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Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.75 mm		V-2	
3.0 mm		V-1	

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 2.0 mm/min