

Panlite® BS-8120R

TEIJIN LIMITED - Polycarbonate

General Information

Product Description

Carbon fiber reinforced grades-20% Carbon fiber, Frictional wear resistant grade

General

Filler / Reinforcement	• Carbon Fiber, 20% Filler by Weight
Properties	• Creep Resistant • High Rigidity • Wear Resistant
Uses	• Industrial Applications
Appearance	• Black
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.36	g/cm ³	ISO 1183
Molding Shrinkage			Internal Method
Across Flow : 4.00 mm	0.40 to 0.60	%	
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 (23°C)	13600	MPa	ISO 527-1/1
Tensile Stress (Break, 23°C)	120	MPa	ISO 527-2/5
Tensile Strain (Break, 23°C)	1.5	%	ISO 527-2/5
Flexural Modulus ² (23°C)	12000	MPa	ISO 178
Flexural Stress ² (23°C)	170	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	7.0	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength (23°C)	25	kJ/m ²	ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/B
0.45 MPa, Unannealed	150	°C	
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	147	°C	
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 (0.75 mm)	80.0	°C	UL 746B
RTI Imp (0.75 mm)	80.0	°C	UL 746B
RTI Str (0.75 mm)	80.0	°C	UL 746B
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	
1.5 mm		V-1	

Processing Information			
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	> 5.0	hr	
Processing (Melt) Temp	290 to 320	°C	
Mold Temperature	80 to 120	°C	

Notes

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