



Wednesday, August 30, 2023

PRL PC-BR1

Polymer Resources Ltd. - Polycarbonate

Units

English ▼

Action

Legend [\(Open\)](#)



General Information

General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• Medium Heat Resistance • Ultra High Impact Resistance • Ultra High Viscosity		
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Blow Molding • Extrusion		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	1.0 to 5.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	5.0E-3 to 8.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, 0.125 in)	9000	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	9600	psi	ASTM D638
Tensile Elongation (Yield, 0.125 in)	7.0	%	ASTM D638
Tensile Elongation (Break, 0.125 in)	120	%	ASTM D638
Flexural Modulus (0.125 in)	335000	psi	ASTM D790
Flexural Strength (0.125 in)	13500	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, 0.125 in)	14	ft·lb/in	ASTM D256
Gardner Impact (0.125 in)	> 320	in·lb	ASTM D3029
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)	275	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	265	°F	ASTM D648
Vicat Softening Temperature	310	°F	ASTM D1525 ²
Optical	Nominal Value	Unit	Test Method
Light Transmittance (100.0 mil)	88.0	%	ASTM D1003
Haze (100.0 mil)	1.00	%	ASTM D1003

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	245 to 255	°F
Drying Time	3.0 to 4.0	hr
Cylinder Zone 1 Temp.	570 to 610	°F
Cylinder Zone 2 Temp.	590 to 630	°F
Cylinder Zone 3 Temp.	610 to 650	°F
Melt Temperature	600 to 650	°F
Extrusion Notes		
Do not exceed 8 hour drying time.		
Mold Temperature: 180° to 240°F		

Notes

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

² Rate B (120°C/h), Loading 2 (50 N)

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