



Wednesday, August 30, 2023

PRL PC-GP4-(color)-1

Units English ▼

Polymer Resources Ltd. - Polycarbonate

Action

Legend ([Open](#))

General Information

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Mold Release
Features	• General Purpose • Good Flow • Good Mold Release
RoHS Compliance	• RoHS Compliant
UL File Number	• E113219
Forms	• Pellets
Processing Method	• Injection Molding

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)	18 to 30	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	5.0E-3 to 7.0E-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)	9500	psi	ASTM D638
Tensile Elongation (Yield, 0.125 in)	6.0	%	ASTM D638
Tensile Elongation (Break, 0.125 in)	120	%	ASTM D638
Flexural Modulus (0.125 in)	330000	psi	ASTM D790
Flexural Strength (0.125 in)	13400	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, 0.125 in)	12	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)	265	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	255	°F	ASTM D648
Vicat Softening Temperature	285	°F	ASTM D1525 ²
RTI Elec			UL 746B
0.07 in	176	°F	
0.12 in	176	°F	
RTI Imp			UL 746B
0.07 in	176	°F	
0.12 in	176	°F	
RTI Str			UL 746B
0.07 in	176	°F	
0.12 in	176	°F	
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index (CTI) (0.0669 in)	PLC 2		UL 746A
High Amp Arc Ignition (HAI)			UL 746A
0.07 in	PLC 0		
0.12 in	PLC 0		
Hot-wire Ignition (HWI)			UL 746A

0.07 in	+852-6957-5415 (HongKong)	PLC 1
0.12 in		PLC 0
Flammability		
Flame Rating		UL 94
0.07 in		V-2
0.12 in		V-2
Optical		
Light Transmittance (100.0 mil)		88.0 % ASTM D1003
Haze (100.0 mil)		1.00 % ASTM D1003

Processing Information		
Injection	Nominal Value	Unit
Drying Temperature	245 to 255	°F
Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	8.0	hr
Rear Temperature	480 to 520	°F
Middle Temperature	500 to 540	°F
Front Temperature	520 to 560	°F
Processing (Melt) Temp	510 to 560	°F
Mold Temperature	150 to 200	°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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