



Wednesday, August 30, 2023

## PRL PC-IM3

Polymer Resources Ltd. - Polycarbonate

Units English ▼

## Action

Legend ([Open](#))

## General Information

## General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Impact Modifier
Features	<ul style="list-style-type: none"> <li>• High Flow</li> <li>• High Impact Resistance</li> <li>• Impact Modified</li> <li>• Low Temperature Impact Resistance</li> </ul>
RoHS Compliance	• RoHS Compliant
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.19		ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	14 to 20	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	5.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage - Across 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)	8300	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	8300	psi	ASTM D638
Tensile Elongation (Yield, 0.125 in)	6.0	%	ASTM D638
Tensile Elongation (Break, 0.125 in)	100	%	ASTM D638
Flexural Modulus (0.125 in)	295000	psi	ASTM D790
Flexural Strength (0.125 in)	12000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
0°F, 0.125 in	11	ft·lb/in	
73°F, 0.125 in	13	ft·lb/in	
Gardner Impact (0.125 in)	> 320	in·lb	ASTM D3029
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
L-Scale	89		
R-Scale	121		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)	255	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	245	°F	ASTM D648
Vicat Softening Temperature	285	°F	ASTM D1525 <sup>2</sup>

## 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	490 to 530	°F
Middle Temperature	510 to 550	°F
Front Temperature	530 to 570	°F
Processing (Melt) Temp	525 to 575	°F
Mold Temperature	160 to 200	°F

## Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> Rate B (120°C/h), Loading 2 (50 N)

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