Polymer Resources
Classic® Engineering Plastic Compounds

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	• High Flow • High Impact Resistance	• Impact Modified • Low Temperature Impact Resistance
RoHS Compliance	• RoHS Compliant	
Forms	• Pellets	
Processing Method	• Injection Molding	

ASTM & ISO Properties [1]

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 [2]

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

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

[2] Rate B (120°C/h), Loading 2 (50 N)