

Polymer Resources

Classic® Engineering Plastic Compounds

Wednesday, August 30, 2023

PRL PC-FD3

Polymer Resources Ltd. - Polycarbonate

Units English

Action

Legend (Open)



General Information

General

Material Status	<ul style="list-style-type: none"> Commercial: Active 		
Availability	<ul style="list-style-type: none"> North America 		
Features	<ul style="list-style-type: none"> Food Contact Acceptable General Purpose 	<ul style="list-style-type: none"> High Flow High Impact Resistance 	<ul style="list-style-type: none"> Medium Heat Resistance
Agency Ratings	<ul style="list-style-type: none"> FDA 		
RoHS Compliance	<ul style="list-style-type: none"> RoHS Compliant 		
Forms	<ul style="list-style-type: none"> Pellets 		
Processing Method	<ul style="list-style-type: none"> 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)	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)	9000	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	10000	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)	335000	psi	ASTM D790
Flexural Strength (0.125 in)	13900	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, 0.125 in)	13	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)	270	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	260	°F	ASTM D648
Vicat Softening Temperature	300	°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

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	500 to 540	°F
Middle Temperature	520 to 560	°F
Front Temperature	540 to 580	°F
Processing (Melt) Temp	550 to 600	°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)

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