



Wednesday, August 30, 2023

PRL PC-HM-FR1

Polymer Resources Ltd. - Polycarbonate

Units

English ▼

Action	Legend (Open)
 	

General Information

General		
Material Status	• Commercial: Active	
Availability	• North America	
Filler / Reinforcement	• Glass Fiber, 10% Filler by Weight	
Additive	• Flame Retardant	
Features	• Flame Retardant • High Heat Resistance • Good Impact Resistance • Self Extinguishing	
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	1.26		ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	5.0 to 12	g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.125 in)	2.0E-3 to 5.0E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow (0.125 in)	2.0E-3 to 5.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield, 0.125 in)	9500	psi	ASTM D638
Tensile Strength (Break, 0.125 in)	8100	psi	ASTM D638
Tensile Elongation (Yield, 0.125 in)	6.0	%	ASTM D638
Tensile Elongation (Break, 0.125 in)	15	%	ASTM D638
Flexural Modulus (0.125 in)	490000	psi	ASTM D790
Flexural Strength (0.125 in)	14900	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F, 0.125 in)	2.0	ft-lb/in	ASTM D256
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	85		
R-Scale	124		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed, 0.125 in)	290	°F	ASTM D648
Deflection Temperature Under Load (264 psi, Unannealed, 0.125 in)	280	°F	ASTM D648
Vicat Softening Temperature	305	°F	ASTM D1525 ²
RTI Elec			UL 746B
0.06 in	176	°F	
0.12 in	176	°F	
RTI Imp			UL 746B
0.06 in	176	°F	
0.12 in	176	°F	
RTI Str			UL 746B
0.06 in	176	°F	
0.12 in	176	°F	
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index (CTI) (0.0591 in)	PLC 3		UL 746A
High Amp Arc Ignition (HAI)			UL 746A
0.06 in	PLC 1		

0.12 in	PLC 1	
Hot-wire Ignition (HWI)		UL 746A
0.06 in	PLC 2	
0.12 in	PLC 1	
Flammability	Nominal Value	Unit Test Method
Flame Rating		UL 94
0.06 in, ALL		V-0
0.12 in, ALL	•	V-0
	•	5VA

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	560 to 600	°F
Middle Temperature	580 to 620	°F
Front Temperature	600 to 640	°F
Processing (Melt) Temp	575 to 625	°F
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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