PRL PC-GP3-D

Polycarbonate

Polymer Resources Ltd.

Message:

PRL PC-GP3-D is a Polycarbonate (PC) product. It can be processed by injection molding and is available in North America.
Characteristics include:
Flame Rated
RoHS Compliant
Heat Resistant
High Flow
Impact Resistant

General Information			
UL YellowCard	E113219-219245		
Features	General Purpose High Flow High Impact Resistance Medium Heat Resistance Self Extinguishing		
RoHS Compliance	RoHS Compliant		
UL File Number	E113219		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.20	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	14 to 20	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.50 to 0.70	%	ASTM D955
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ASTM D785
M-Scale	70		
R-Scale	118		
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			ASTM D638
Yield, 3.18 mm	62.1	MPa	
Break, 3.18 mm	68.9	MPa	
Tensile Elongation			ASTM D638
Yield, 3.18 mm	6.0	%	
Break, 3.18 mm	120	%	
Flexural Modulus (3.18 mm)	2310	MPa	ASTM D790
Flexural Strength (Break, 3.18 mm)	95.8	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**

Notched Izod Impact (23°C, 3.18 mm)	690	J/m	ASTM D256
Gardner Impact (3.18 mm)	> 36.2	J	ASTM D3029
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.18 mm	132	°C	
1.8 MPa, Unannealed, 3.18 mm	127	°C	
Vicat Softening Temperature	149	°C	ASTM D1525 [1]
RTI Elec			UL 746
0.750 mm	80.0	°C	
1.50 mm	125	°C	
3.00 mm	125	°C	
RTI Imp			UL 746
0.750 mm	80.0	°C	
1.50 mm	115	°C	
3.00 mm	115	°C	
RTI Str			UL 746
0.750 mm	80.0	°C	
1.50 mm	125	°C	
3.00 mm	125	°C	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength (0.750 mm)	28	kV/mm	ASTM D149
Arc Resistance (0.750 mm)	PLC 5		ASTM D495
Comparative Tracking Index (CTI) (0.750 mm)	PLC 2		UL 746
High Amp Arc Ignition (HAI)			UL 746
1.50 mm	PLC 0		
3.00 mm	PLC 1		
High Voltage Arc Tracking Rate (HVTR) (0.750 mm)	PLC 2		UL 746
Hot-wire Ignition (HWI)			UL 746
1.50 mm	PLC 2		
3.00 mm	PLC 1		
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.749 mm, ALL	V-2		
1.50 mm, ALL	V-2		
3.00 mm, ALL	V-2		
Optical	**Nominal Value**	**Unit**	**Test Method**
Transmittance (2540 µm)	88.0	%	ASTM D1003
Haze (2540 µm)	1.0	%	ASTM D1003
Injection	**Nominal Value**	**Unit**	
Drying Temperature	118 to 124	°C	

Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	8.0	hr
Rear Temperature	260 to 282	°C
Middle Temperature	271 to 293	°C
Front Temperature	282 to 304	°C
Processing (Melt) Temp	288 to 316	°C
Mold Temperature	71.1 to 93.3	°C

NOTE	
1.	Rate B (120°C/h), Loading 2 (50 N)

Recommended distributors for this material

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