

Polymer Resources PC-GP3-D-[color]-1 Polycarbonate, General Purpose, High Flow with Mold Release

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Molded

Material Notes:

Polycarbonate, General Purpose, High Flow with Mold Release
 Process: Injection Molding
 Notes: All physical, mechanical and thermal testing conducted on 1/8-inch thick, un-pigmented, test samples.
 Information provided by Polymer Resources Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Polymer-Resources-PC-GP3-D-color-1-Polycarbonate-General-Purpose-High-Flow-with-Mold-Release.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	14 - 20 g/10 min @Load 1.20 kg, Temperature 300 °C	14 - 20 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	70	70	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	62.1 MPa	9000 psi	ASTM D638
Tensile Strength, Yield	62.1 MPa	9000 psi	ASTM D638
Elongation at Break	120 %	120 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Flexural Strength	95.8 MPa	13900 psi	ASTM D790
Flexural Modulus	2.31 GPa	335 ksi	ASTM D790
Izod Impact, Notched	6.94 J/cm @Temperature 22.8 °C	13.0 ft-lb/in @Temperature 73.0 °F	ASTM D256
Gardner Impact	36.2 J	26.7 ft-lb	ASTM D3029

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	132 °C	270 °F	ASTM D648
Deflection Temperature at 1.8 MPa	127 °C	260 °F	

<small>(264 psi)</small> Thermal Properties	Metric	English	ASTM D648 Comments
Vicat Softening Point	149 °C	300 °F	120°C/h, 50 N; ASTM D1525
UL RTI, Electrical	80.0 °C	176 °F	UL 746
	@Thickness 0.749 mm	@Thickness 0.0295 in	
	125 °C	257 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	125 °C	257 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746
	@Thickness 0.749 mm	@Thickness 0.0295 in	
	125 °C	257 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	125 °C	257 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	80.0 °C	176 °F	UL 746
	@Thickness 0.749 mm	@Thickness 0.0295 in	
	115 °C	239 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	115 °C	239 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-2	V-2	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-2	V-2	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Optical Properties	Metric	English	Comments
Haze	1.0 %	1.0 %	ASTM D1003
UV Transmittance	88 %	88 %	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	ASTM D257
Dielectric Strength			ASTM D149

Electrical Properties	28.0 kV/mm Metric	710 kV/in English	Comments
Comparative Tracking Index	250 - 400 V	250 - 400 V	UL 746
Hot Wire Ignition, HWI	30 - 60 sec	30 - 60 sec	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	60 - 120 sec	60 - 120 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	60 - 120 arcs	60 - 120 arcs	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
High Voltage Arc-Tracking Rate, HVTR	25.4 - 80.0 mm/min	1.00 - 3.15 in/min	UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	260 - 282 °C	500 - 540 °F	
Middle Barrel Temperature	271 - 293 °C	520 - 560 °F	
Front Barrel Temperature	282 - 304 °C	540 - 580 °F	
Melt Temperature	288 - 316 °C	550 - 600 °F	
Mold Temperature	71.1 - 93.3 °C	160 - 200 °F	
Drying Temperature	118 - 124 °C	245 - 255 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	

Descriptive Properties	Value	Comments
Vent	0.0005	

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