

Polymer Resources PC-HM-FR1 Polycarbonate, 10% Glass Reinforced, Flame Retardant

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, 10% Glass Filled , Polycarbonate, Glass Fiber Filled, Flame Retardant

Material Notes:

Polycarbonate, 10% Glass Reinforced, Flame Retardant 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-HM-FR1-Polycarbonate-10-Glass-Reinforced-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.26 g/cc	1.26 g/cc	ASTM D792
Linear Mold Shrinkage	0.0020 - 0.0050 cm/cm	0.0020 - 0.0050 in/in	ASTM D955
Melt Flow	5.0 - 12 g/10 min @Load 1.20 kg, Temperature 300 °C	5.0 - 12 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ASTM D785
Hardness, Rockwell R	124	124	ASTM D785
Tensile Strength at Break	65.5 MPa	9500 psi	ASTM D638
Tensile Strength, Yield	55.8 MPa	8100 psi	ASTM D638
Elongation at Break	15 %	15 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Flexural Strength	103 MPa	14900 psi	ASTM D790
Flexural Modulus	3.38 GPa	490 ksi	ASTM D790
Izod Impact, Notched	1.07 J/cm @Temperature 22.8 °C	2.00 ft-lb/in @Temperature 73.0 °F	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	143 °C	290 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	138 °C	280 °F	ASTM D648
Vicat Softening Point	152 °C	305 °F	120°C/h, 50 N; ASTM D1525

Thermal Properties UL RTI, Electrical	Metric	English	Comments UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	80.0 °C	176 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	80.0 °C	176 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	80.0 °C	176 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	80.0 °C	176 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flammability, UL94	V-0	V-0	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0 - 5VA	V-0 - 5VA	
	@Thickness 3.00 mm	@Thickness 0.118 in	

Electrical Properties	Metric	English	Comments
Comparative Tracking Index	175 - 250 V	175 - 250 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 1.50 mm	@Thickness 0.0591 in	
	60 - 120 arcs	60 - 120 arcs	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	293 - 316 °C	560 - 600 °F	
Middle Barrel Temperature	304 - 327 °C	580 - 620 °F	

Front Barrel Temperature Processing Properties	316 - 338 °C Metric	600 - 640 °F English	Comments
Melt Temperature	302 - 329 °C	575 - 625 °F	
Mold Temperature	82.2 - 116 °C	180 - 240 °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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