

Entec Hylex® P1010FR Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, Flame Retardant

Material Notes:

Information provided by Ravago.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Entec-Hylex-P1010FR-Polycarbonate.php

Physical Properties	Metric	English	Comments
Density	1.24 g/cc	0.0448 lb/in ³	ASTM D792
Water Absorption	0.14 %	0.14 %	24 hrs; ASTM D570
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	85	85	ASTM D785
Tensile Strength at Break	65.5 MPa	9500 psi	ASTM D638
Elongation at Break	120 %	120 %	ASTM D638
Flexural Strength	89.6 MPa	13000 psi	ASTM D790
Flexural Modulus	2.14 GPa	310 ksi	ASTM D790
Izod Impact, Notched	6.41 J/cm	12.0 ft-lb/in	73°F, 0.125 in; ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	143 °C	290 °F	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	135 °C	275 °F	Unannealed; ASTM D648
Vicat Softening Point	152 °C	305 °F	ASTM D1525
Flammability, UL94	V-0	V-0	0.0610 in, NA

Optical Properties	Metric	English	Comments
Refractive Index	1.585	1.585	ASTM D542
Haze	0.90 - 1.0 %	0.90 - 1.0 %	125 mil; ASTM D1003

Optical Properties	Metric	English	Comments
Transmittance, visible	91.69 %	91.69 %	120 mm, ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.00e+16 ohm-cm	4.00e+16 ohm-cm	ASTM D257
Dielectric Strength	15.0 kV/mm	380 kV/in	in Air, 0.125 in; ASTM D149
Arc Resistance	90 sec	90 sec	ASTM D495

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	271 - 282 °C	520 - 540 °F	
Middle Barrel Temperature	277 - 288 °C	530 - 550 °F	
Front Barrel Temperature	282 - 299 °C	540 - 570 °F	
Nozzle Temperature	277 - 299 °C	530 - 570 °F	
Melt Temperature	288 - 316 °C	550 - 600 °F	
Mold Temperature	76.7 - 93.3 °C	170 - 200 °F	
Drying Temperature	121 °C	250 °F	
Dry Time	3 - 12 hour	3 - 12 hour	
Moisture Content	<= 0.020 %	<= 0.020 %	
Injection Pressure	6.89 - 12.4 MPa	1000 - 1800 psi	
Back Pressure	0.483 - 1.03 MPa	70.0 - 150 psi	
Shot Size	40 - 60 %	40 - 60 %	
Screw Speed	40 - 70 rpm	40 - 70 rpm	

Descriptive Properties	Value	Comments
Holding Pressure	700 to 1200 psi	

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