

Polymer Resources PC-UV1-D Polycarbonate, UV-stabilized, Low Flow

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

Material Notes:

Polycarbonate, UV-stabilized, Low Flow 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-UV1-D-Polycarbonate-UV-stabilized-Low-Flow.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	5.0 - 10 g/10 min @Load 1.20 kg, Temperature 300 °C	5.0 - 10 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	72.4 MPa	10500 psi	ASTM D638
Tensile Strength, Yield	62.1 MPa	9000 psi	ASTM D638
Elongation at Break	130 %	130 %	ASTM D638
Elongation at Yield	7.0 %	7.0 %	ASTM D638
Flexural Strength	96.5 MPa	14000 psi	ASTM D790
Flexural Modulus	2.31 GPa	335 ksi	ASTM D790
Izod Impact, Notched	9.08 J/cm @Temperature 22.8 °C	17.0 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)	138 °C	280 °F	ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 °C	270 °F	ASTM D648
Vicat Softening Point	154 °C	310 °F	120°C/h, 50 N; ASTM D1525

Thermal Properties	Metric	English	Comments
UL RTI, Electrical	120 °C	248 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical with Impact	120 °C	248 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	120 °C	248 °F	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
UL RTI, Mechanical without Impact	105 °C	221 °F	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	110 °C	230 °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	11.8 kV/mm	300 kV/in	ASTM D149
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	
	30 - 60 sec	30 - 60 sec	UL 746
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	UL 746
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Electrical Properties	Metric ^{arcs}	English ^{arcs}	Comments
	@Thickness 3.00 mm	@Thickness 0.118 in	UL 746
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	288 - 310 °C	550 - 590 °F	
Middle Barrel Temperature	299 - 321 °C	570 - 610 °F	
Front Barrel Temperature	310 - 332 °C	590 - 630 °F	
Melt Temperature	316 - 343 °C	600 - 650 °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
Outdoor Suitability	f1	
Vent	0.0005	

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