

Styron EMERGE[®],ç 4310-22 Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

EMERGE[®],ç PC 4310-22 advanced resin is high-performance polycarbonate resin offering high heat resistance, toughness, and superior flow. Applications: Consumer Electronics and Information Technology Equipment Computer and Business Equipment Portable Electronics
Information provided by Dow This product line was spun off from Dow Chemical to Styron in 2010.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-EMERGE-4310-22-Polycarbonate.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	22 g/10 min @Load 1.20 kg, Temperature 300 Â°C	22 g/10 min @Load 2.65 lb, Temperature 572 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength, Ultimate	65.5 MPa	9500 psi	0.125 in, injection molded, unannealed; ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	0.125 in, injection molded, unannealed; ASTM D638
Elongation at Break	120 %	120 %	0.125 in, injection molded, unannealed; ASTM D638
Tensile Modulus	2.34 GPa	340 ksi	0.125 in, injection molded, unannealed; ASTM D638
Flexural Strength	96.5 MPa	14000 psi	0.125 in, injection molded, unannealed; ASTM D790
Flexural Modulus	2.41 GPa	350 ksi	0.125 in, injection molded, unannealed; ASTM D790
Izod Impact, Notched	7.47 J/cm	14.0 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256
Dart Drop, Total Energy	72.0 J	53.1 ft-lb	8000 ipm; ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear	68.4 Âµm/m-Â°C @Temperature -40.0 -	38.0 Âµin/in-Â°F @Temperature -40.0 -	ASTM D696

Thermal Properties	82.2 Å°C Metric	180 Å°F English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	142 Å°C	288 Å°F	0.157 in, annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	126 Å°C	258 Å°F	0.157 in, unannealed; ASTM D648
	139 Å°C	282 Å°F	0.157 in, annealed; ASTM D648
Flammability, UL94	HB	HB	0.0630 in
	HB	HB	0.120 in

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+17 ohm-cm	2.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.0	3.0	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dielectric Strength	3.0	3.0	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	16.5 kV/mm	420 kV/in	ASTM D149
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
Dissipation Factor	0.0020	0.0020	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Processing Properties	Metric	English	Comments
Melt Temperature	260 - 277 Å°C	500 - 531 Å°F	
Mold Temperature	71.0 - 93.0 Å°C	160 - 199 Å°F	
Drying Temperature	121 Å°C	250 Å°F	
Dry Time	3 - 4 hour	3 - 4 hour	

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