

Styron EMERGE[®] 4510-10 Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

EMERGE[®] PC 4510-10 advanced resin is a general purpose polycarbonate resin offering ignition resistance, heat resistance and excellent toughness. 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-4510-10-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	10 g/10 min @Load 1.20 kg, Temperature 300 Â°C	10 g/10 min @Load 2.65 lb, Temperature 572 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	71.0 MPa	10300 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	150 %	150 %	0.125 in, injection molded, unannealed; ASTM D638
Tensile Modulus	2.30 GPa	334 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	9.08 J/cm	17.0 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	141 Â°C	286 Â°F	0.157 in, annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	122 Â°C	252 Â°F	0.157 in, unannealed; ASTM D648
	138 Â°C	280 Â°F	0.157 in, annealed; ASTM D648

Thermal Properties	Metric	English	Comments
Flammability, UL94	V-2	V-2	0.0625 in
	V-2	V-2	0.125 in

Processing Properties	Metric	English	Comments
Melt Temperature	288 - 316 Â°C	550 - 601 Â°F	
Mold Temperature	71.0 - 104 Â°C	160 - 219 Â°F	
Drying Temperature	121 Â°C	250 Â°F	
Dry Time	3 - 4 hour	3 - 4 hour	

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