

Styron EMERGE[®],ç 9500CR Polycarbonate (PC) / Polyethylene Terephthalate (PET)

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate/PET Polyester Blend , Polyester, TP , Polyethylene Terephthalate (PET)

Material Notes:

Overview: EMERGE[®],ç PC/PET 9500 CR advanced resin is a polycarbonate blend with excellent chemical resistance and ignition resistance properties. This grade was designed for use in medical equipment housings and other applications that are subject to repeated exposure to a variety of cleaners and disinfectants commonly used in hospitals. This grade has good aesthetics and excellent toughness. It has a UL 94 rating of V-0 at 2.0 mm. Applications:Medical device housingsInformation provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-EMERGE-9500CR-Polycarbonate-PC-Polyethylene-Terephthalate-PET.php

Physical Properties	Metric	English	Comments
Density	1.29 g/cc	0.0466 lb/in ³	ASTM D792
Linear Mold Shrinkage, Flow	0.0060 - 0.0095 cm/cm	0.0060 - 0.0095 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	10 g/10 min	10 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 260 Â°C	@Load 11.0 lb, Temperature 500 Â°F	
	13 g/10 min	13 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 265 Â°C	@Load 11.0 lb, Temperature 509 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	110	110	Injection Molded; ASTM D785
	@Thickness 3.20 mm	@Thickness 0.126 in	
Tensile Strength at Break	45.0 MPa	6530 psi	50 mm/min, Injection Molded; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Tensile Strength, Yield	53.0 MPa	7690 psi	50 mm/min, Injection Molded; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Elongation at Break	150 %	150 %	50 mm/min, Injection Molded; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Elongation at Yield	4.1 %	4.1 %	50 mm/min, Injection Molded; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Tensile Modulus	2.33 GPa	338 ksi	5 mm/min, Injection Molded; ASTM D638

Mechanical Properties	@Thickness 3.20 mm Metric	@Thickness 0.126 in English	Comments
Flexural Strength	82.0 MPa @Thickness 3.20 mm	11900 psi @Thickness 0.126 in	1.3 mm/min, Injection Molded; ASTM D790
Flexural Modulus	2.27 GPa @Thickness 3.20 mm	329 ksi @Thickness 0.126 in	1.3 mm/min, Injection Molded; ASTM D790
Izod Impact, Notched	7.50 J/cm @Thickness 3.20 mm, Temperature 23.0 Â°C	14.1 ft-lb/in @Thickness 0.126 in, Temperature 73.4 Â°F	Injection Molded; ASTM D256
Dart Drop, Total Energy	45.0 J @Thickness 3.20 mm, Temperature 23.0 Â°C	33.2 ft-lb @Thickness 0.126 in, Temperature 73.4 Â°F	Injection Molded, Peak Energy; ASTM D3763
	49.0 J @Thickness 3.20 mm, Temperature 0.000 Â°C	36.1 ft-lb @Thickness 0.126 in, Temperature 32.0 Â°F	Injection Molded, Peak Energy; ASTM D3763
	60.0 J @Thickness 3.20 mm, Temperature 23.0 Â°C	44.3 ft-lb @Thickness 0.126 in, Temperature 73.4 Â°F	Injection Molded, Total Energy; ASTM D3763
	62.0 J @Thickness 3.20 mm, Temperature 0.000 Â°C	45.7 ft-lb @Thickness 0.126 in, Temperature 32.0 Â°F	Injection Molded, Total Energy; ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	74.0 Âµm/m-Â°C @Temperature -40.0 - 80.0 Â°C	41.1 Âµin/in-Â°F @Temperature -40.0 - 176 Â°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	109 Â°C	228 Â°F	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	79.0 Â°C	174 Â°F	Unannealed; ASTM D648
Vicat Softening Point	140 Â°C @Load 1.02 kg	284 Â°F @Load 2.25 lb	Rate B (120Â°C/h); ASTM D1525
Flammability, UL94	2.00 @Thickness 1.50 mm	2.00 @Thickness 0.0591 in	
	V-0 @Thickness 2.00 mm	V-0 @Thickness 0.0787 in	
	5VB	5VB	

Thermal Properties	Metric @ Thickness 2.50 mm	English @ Thickness 0.0984 in	Comments
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Processing Properties	Metric	English	Comments
Melt Temperature	249 - 282 Â°C	480 - 540 Â°F	
Mold Temperature	43.3 - 65.6 Â°C	110 - 150 Â°F	
Drying Temperature	121 Â°C	250 Â°F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	

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