

Styron CALIBRE[®],ç 5201-12 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBRE[®],ç 5201-12 polycarbonate resin is 20% glass reinforced containing mold release for optimal processing. This resin exhibits high modulus and excellent dimensional stability. CALIBRE 5201-12 resin is typically used in electrical market applications. CALIBRE 5201-12 resin has undergone biocompatibility testing based on ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. Main Characteristics: Glass reinforced Ignition resistant ISO 10993 Applications: Medical applications Handheld surgical devices Powdered medical devices Equipment housings Electrical components Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-5201-12-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Density	1.36 g/cc	0.0491 lb/in ³	ISO 1183/B; ASTM D792
Linear Mold Shrinkage, Flow	0.0020 - 0.0040 cm/cm	0.0020 - 0.0040 in/in	ISO 294-4; ASTM D955
Melt Flow	12 g/10 min @Load 1.20 kg, Temperature 300 °C	12 g/10 min @Load 2.65 lb, Temperature 572 °F	ISO 1133; ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	122	122	ASTM D785
Tensile Strength at Break	82.7 MPa	12000 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	82.7 MPa	12000 psi	50 mm/min; ISO 527-2/50; ASTM D638
Elongation at Break	2.6 %	2.6 %	ISO 527-2/50
	3.0 %	3.0 %	50 mm/min; ASTM D638
Elongation at Yield	2.6 %	2.6 %	50 mm/min; ISO 527-2/50; ASTM D638
Tensile Modulus	5.17 GPa	750 ksi	50 mm/min; ISO 527-2/50; ASTM D638
Flexural Strength	148 MPa	21500 psi	Method I (3 point load), 2.0 mm/min; ISO 178; ASTM D790
Flexural Modulus	4.82 GPa	699 ksi	2.0 mm/min; ISO 178
	4.83 GPa	701 ksi	Method I (3 point load), 2.0 mm/min; ASTM D790
Izod Impact, Notched	1.10 J/cm	2.06 ft-lb/in	ASTM D256

Mechanical Properties	Metric @Thickness 3.20 mm, Temperature 23.0 Â°C	English @Thickness 0.126 in, Temperature 73.4 Â°F	Comments
Dart Drop, Total Energy	46.3 J @Thickness 3.20 mm	34.1 ft-lb @Thickness 0.126 in	3.39 m/sec; ASTM D3763

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	148 Â°C	298 Â°F	Annealed; ISO 75-2/B
	148 Â°C	298 Â°F	Annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	138 Â°C	280 Â°F	Unannealed; ISO 75-2/A; ASTM D648
	142 Â°C	288 Â°F	Annealed; ISO 75-2/A; ASTM D648
Vicat Softening Point	158 Â°C	316 Â°F	ISO 306/B50
	159 Â°C @Load 5.10 kg	318 Â°F @Load 11.2 lb	Rate A (50Â°C/h); ASTM D1525
Flammability, UL94	V-2 @Thickness 1.59 mm	V-2 @Thickness 0.0626 in	
	V-0 @Thickness 3.05 mm	V-0 @Thickness 0.120 in	

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