

Styron CALIBREâ„¸ 2091-15 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBREâ„¸ MEGARADâ„¸ 2091 Polycarbonate Resins are designed for single use medical devices (SUDs) that require gamma and electron-beam irradiation and an accelerated schedule for delivery of post-radiated products to customers â€” potentially 10 to 21 days sooner than currently available radiation-stabilized polycarbonate resins, depending on irradiation conditions. In addition, the resins are meant for applications that require a more water white appearance rather than the traditional purple tinted resin used to compensate for these sterilization methods. CALIBREâ„¸ MEGARADâ„¸ 2091-15 Polycarbonate resins has undergone biocompatibility testing based on ISO 10993 standards (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. Main

Characteristics:ISO 10993 (in progress)Mold ReleaseImproved Color CompensationApplications:Medical ApplicationsInformation provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-2091-15-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183/B; ASTM D792
Water Absorption	0.32 %	0.32 %	Equilibrium, 50% RH; ISO 62; ASTM D570
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Linear Mold Shrinkage, Flow	0.15 %	0.15 %	ISO 62; ASTM D570
	@Temperature 23.0 Â°C, Time 86400 sec	@Temperature 73.4 Â°F, Time 24.0 hour	
Melt Flow	15 g/10 min	15 g/10 min	ISO 1133; ASTM D1238
	@Load 1.20 kg, Temperature 300 Â°C	@Load 2.65 lb, Temperature 572 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	68.0 MPa	9860 psi	ISO 527-2/50
	68.3 MPa	9910 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	ISO 527-2/50
	62.1 MPa	9010 psi	50 mm/min; ASTM D638
Elongation at Break	150 %	150 %	50 mm/min; ASTM D638

Elongation at Yield Mechanical Properties	6.0 % Metric	6.0 % English	50 mm/min; ISO 527-2/50; ASTM D638 Comments
Tensile Modulus	2.30 GPa	334 ksi	50 mm/min; ISO 527-2/50; ASTM D638
Flexural Strength	96.5 MPa	14000 psi	Method I (3 point load), 2.0 mm/min; ASTM D790
	98.0 MPa	14200 psi	3-point, 2.0 mm/min; ISO 178
Izod Impact, Notched	7.50 J/cm @Temperature 23.0 Â°C	14.1 ft-lb/in @Temperature 73.4 Â°F	ASTM D256
Izod Impact, Notched (ISO)	75.0 kJ/mÂ² @Temperature 23.0 Â°C	35.7 ft-lb/inÂ² @Temperature 73.4 Â°F	ISO 180/A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	ASTM D256; ISO 180
Tensile Impact Strength	378 kJ/mÂ²	180 ft-lb/inÂ²	ASTM D1822
Dart Drop, Total Energy	81.3 J	60.0 ft-lb	3.39 m/sec; ASTM D3763
Abrasion	45	45	[%] Taber; ASTM D1044

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