

Styron CALIBREâ„¢ MEGARAD 2081-6LR Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBREâ„¢ MEGARAD 2081-6LR Polycarbonate resin was developed for medical applications requiring improved resistance to lipids over standard polycarbonate resins. When exposed to a 20% intralipid emulsion solution under strained conditions, CALIBRE MEGARAD 2081-6LR exhibits significant property retention compared to standard polycarbonate. It also provides end-users of radiation sterilized medical devices a color closer to the water-clear look of the natural resin. When exposed to high energy radiation (gamma or electron beam), CALIBRE MEGARAD 2081-6LR can reduce the color shift by 50% compared to general purpose polycarbonate resins. CALIBRE MEGARAD 2081-6LR has been evaluated with respect to ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. Main Characteristics: Improved lipid resistance Stabilized for high-energy radiation Transparent Contains mold release ISO 10993 Applications: Medical applications Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-MEGARAD-2081-6LR-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM D792
Water Absorption	0.32 %	0.32 %	Equilibrium, 50% RH; ASTM D570
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	0.15 %	0.15 %	ASTM D570
	@Temperature 23.0 Â°C, Time 86400 sec	@Temperature 73.4 Â°F, Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	6.0 g/10 min	6.0 g/10 min	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	68.3 MPa	9910 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	65.5 MPa	9500 psi	50 mm/min; ASTM D638
Elongation at Break	130 %	130 %	50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ASTM D638
Tensile Modulus	2.34 GPa	339 ksi	50 mm/min; ASTM D638

Flexural Strength Mechanical Properties	96.5 MPa Metric	14000 psi English	Method I (3 point load), 2.0 mm/min; ASTM D790
Flexural Modulus	2.41 GPa	350 ksi	Method I (3 point load), 2.0 mm/min; ASTM D790
Izod Impact, Notched	8.50 J/cm @Temperature 23.0 Â°C	15.9 ft-lb/in @Temperature 73.4 Â°F	ASTM D256
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	ASTM D256
Tensile Impact Strength	567 kJ/mÂ²	270 ft-lb/inÂ²	ASTM D1822
Dart Drop, Total Energy	89.3 J	65.9 ft-lb	3.39 m/sec; ASTM D3763
Abrasion	45	45	[%] Taber; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.0 Âµm/m-Â°C	37.8 Âµin/in-Â°F	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	145 Â°C	293 Â°F	Annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	129 Â°C	264 Â°F	Unannealed; ASTM D648
	142 Â°C	288 Â°F	Annealed; ASTM D648
Vicat Softening Point	151 Â°C	304 Â°F	Rate A (50Â°C/h); ASTM D1525

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
Haze	1.0 %	1.0 %	ASTM D1003
Transmission, Visible	71 - 85 %	71 - 85 %	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+17 ohm-cm	2.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.0 @Frequency 60.0 Hz	3.0 @Frequency 60.0 Hz	ASTM D150
	3.0 @Frequency 1.00e+6 Hz	3.0 @Frequency 1.00e+6 Hz	ASTM D150

Dielectric Strength Electrical Properties	17.0 kV/mm Metric	432 kV/in English	ASTM D149 Comments
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 50.0 Hz	@Frequency 50.0 Hz	
	0.0020	0.0020	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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