Styron CALIBREâ„¢ 2061-15 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBREâ„¢ 2061-15 resin is suitable for steam and ethylene oxide sterilization required by the health care industry. CALIBRE 2061-15 provides excellent heat resistance, impact strength, and processability. CALIBRE 2061-6 resin is compliant with ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. This product contains mold release and is currently available in black color. Main Characteristics:ISO 10993Applications:Medical applicationsInformation provided by Styron

Order this product through the following link:
http://www.lookpolymers.com/polymer_Styron-CALIBRE-2061-15-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/inÂ³	ISO 1183/A
Water Absorption	0.32 % @Temperature 23.0 Â°C	0.32 % @Temperature 73.4 Â°F	Equilibrium, 50% RH; ISO 62
	0.15 % @Temperature 23.0 Â°C, Time 86400 sec	0.15 % @Temperature 73.4 Â°F, Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ISO 294-4
Melt Flow	15 g/10 min @Load 1.20 kg, Temperature 300 Â°C	15 g/10 min @Load 2.65 lb, Temperature 572 Â°F	ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	73	73	ASTM D785
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	6.0 %	6.0 %	50 mm/min; ASTM D638; ISO 527-2/50
Tensile Modulus	2.21 GPa	321 ksi	50 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Flexural Strength	96.5 MPa	14000 psi	Method I (3 point load), 2.0 mm/min; ASTM D790
	98.0 MPa	14200 psi	2.0 mm/min; ISO 178
Flexural Modulus	2.40 GPa	348 ksi	2.0 mm/min; ISO 178
	2.41 GPa	350 ksi	Method I (3 point load), 2.0 mm/min; ASTM D790
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)	74.0 kJ/mÂ² @Temperature 23.0 Â°C	35.2 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
Charpy Impact, Notched	2.50 J/cmÂ² @Temperature 23.0 Â°C	11.9 ft-lb/inÂ² @Temperature 73.4 Â°F	ISO 179/1eA
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

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.0 Âµm/m-Â°C @Temperature -40.0 - 82.0 Â°C	37.8 Âµin/in-Â°F @Temperature -40.0 - 180 Â°F	ISO 11359-2
Deflection Temperature at 0.46 MPa (66 psi)	139 Â°C	282 Â°F	Annealed; ISO 75-2/B; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	120 Â°C	248 Â°F	Unannealed; ISO 75-2/A
	122 Â°C	252 Â°F	Unannealed; ASTM D648
	136 Â°C	277 Â°F	Annealed; ASTM D648; ISO 75-2/A
Vicat Softening Point	143 Â°C	289 Â°F	ISO 306/B50
	148 Â°C @Load 5.10 kg	298 Â°F @Load 11.2 lb	Rate A (50Â°C/h); ASTM D1525

Thermal Properties	Metric	English	Comments
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542; ISO 489
Haze	1.0 %	1.0 %	ASTM D1003
Transmission, Visible	89 %	89 %	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	17.0 kV/mm	432 kV/in	ASTM D149
	17.0 kV/mm	432 kV/in	IEC 60243-1
Dissipation Factor	0.0010 @Frequency 50.0 Hz	0.0010 @Frequency 50.0 Hz	ASTM D150
	0.0020 @Frequency 1.00e+6 Hz	0.0020 @Frequency 1.00e+6 Hz	ASTM D150

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