

Styron CALIBRE[®],ç 2061-6 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBRE[®],ç 2061-6 resin is suitable for steam and ethylene oxide sterilization required by the health care industry. CALIBRE 2061-6 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-2061-6-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183/A
Water Absorption	0.32 %	0.32 %	Equilibrium, 50% RH; ISO 62
	@Temperature 23.0 Å°C	@Temperature 73.4 Å°F	
Maximum Moisture Content	0.15 %	0.15 %	ISO 62
	@Temperature 23.0 Å°C, Time 86400 sec	@Temperature 73.4 Å°F, Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ISO 294-4
Melt Flow	6.0 g/10 min	6.0 g/10 min	ISO 1133
	@Load 1.20 kg, Temperature 300 Å°C	@Load 2.65 lb, Temperature 572 Å°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	73	73	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	68.3 MPa	9910 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	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
Tensile Modulus	2.41 GPa	350 ksi	50 mm/min; ASTM D638
Flexural Strength	96.5 MPa	14000 psi	2.0 mm/min; ASTM D470

Flexural Modulus Mechanical Properties	2.41 GPa Metric	350 ksi English	2.0 mm/min; ASTM D470 Comments
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	ASTM D3763
Abrasion	45	45	[%] Taber; ASTM D1044

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)	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	156 Â°C @Load 5.10 kg	313 Â°F @Load 11.2 lb	Rate A (50Â°C/h); ASTM D1525
Oxygen Index	26 %	26 %	ISO 4289-2

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
Dissipation Factor	0.0010 @Frequency 50.0 Hz	0.0010 @Frequency 50.0 Hz	ASTM D150

Electrical Properties	0.0020 Metric	0.0020 English	Comments ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	271 - 288 Â°C	520 - 550 Â°F	
Middle Barrel Temperature	277 - 299 Â°C	531 - 570 Â°F	
Front Barrel Temperature	299 - 327 Â°C	570 - 621 Â°F	
Nozzle Temperature	299 - 327 Â°C	570 - 621 Â°F	
Melt Temperature	299 - 327 Â°C	570 - 621 Â°F	
Mold Temperature	76.7 - 110 Â°C	170 - 230 Â°F	
Drying Temperature	121 Â°C	250 Â°F	
Dry Time	3.00 hour	3.00 hour	
Screw Speed	40 - 70 rpm	40 - 70 rpm	

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