

Styron CALIBRE[®],ç 2061-22 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBRE[®],ç 2061-22 resin is suitable for steam and ethylene oxide sterilization required by the health care industry. CALIBRE 2061-22 provides exceptional clarity, heat resistance, impact strength, and processability, and has low contamination levels. CALIBRE 2061-22 resin has undergone biocompatibility testing based on ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. This product contains mold release. Main Characteristics:ISO 10993Applications:Medical applicationsInformation provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-2061-22-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183/A; 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	
	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	22 g/10 min	22 g/10 min	ASTM D1238; ISO 1133
	@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	65.5 MPa	9500 psi	50 mm/min; ASTM D638
	66.0 MPa	9570 psi	ISO 527-2/50
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527-2/50; ASTM D638
Elongation at Break	120 %	120 %	50 mm/min; ISO 527-2/50; ASTM D638
Tensile Modulus	2.34 GPa	339 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; ISO 178; ASTM D790
Flexural Modulus	2.41 GPa	350 ksi	Method I (3 point load), 2.0 mm/min; ISO 178; ASTM D790

Mechanical Properties	Metric	English	Comments
Izod Impact, Notched	750 J/cm	lb/in	ASTM D256
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Izod Impact, Notched (ISO)	73.0 kJ/mÂ²	34.7 ft-lb/inÂ²	ISO 180/A
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Dart Drop, Total Energy	72.3 J	53.3 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
	@Temperature -40.0 - 82.0 Â°C	@Temperature -40.0 - 180 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	142 Â°C	288 Â°F	Annealed; ISO 75-2/B; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	126 Â°C	259 Â°F	Unannealed; ASTM D648; ISO 75-2/A
	126 Â°C	259 Â°F	Annealed; ASTM D648; ISO 75-2/A
Vicat Softening Point	152 Â°C	306 Â°F	Rate A (50Â°C/h); ISO 306/B50; ASTM D1525
	@Load 5.10 kg	@Load 11.2 lb	
Flammability, UL94	HB	HB	
	@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	3.0	ASTM D150
	@Frequency 60.0 Hz	@Frequency 60.0 Hz	
	3.0	3.0	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Electrical Properties	Metric	English	Comments
	17.0 kV/mm	432 kV/in	IEC 60243-1
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	

Descriptive Properties	Value	Comments
Average Extent of Burring	3 cm	ASTM D635

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