

Styron CALIBREâ„¢ 2061 HD 15 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBREâ„¢ 2061 HD 15 Polycarbonate Resins are designed for steam and ethylene oxide sterilization required by the health care industry. CALIBRE 2061 HD 15 Polycarbonate Resins offer a level of cleanliness/clarity and melt flow consistency that is superior for those applications with critical optical performance requirements. CALIBRE 2061 HD 15 Polycarbonate Resin has been tested under ISO 10993 standards. This product contains mold release. Main Characteristics: ISO 10993 (in progress) Applications: Medical Applications Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-2061-HD-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	
	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	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ISO 294-4; ASTM D955
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	6.0 %	6.0 %	50 mm/min; ISO 527-2/50; ASTM D638
Tensile Modulus	2.30 GPa	334 ksi	50 mm/min; ISO 527-2/50; ASTM D638

Mechanical Properties	Metric	English	Comments
	MPa	psi	(3 point load), 2.0 mm/min; ISO 178; ASTM D790
Flexural Modulus	2.40 GPa	348 ksi	Method I (3 point load), 2.0 mm/min; ISO 178; ASTM D790
Izod Impact, Notched	19.0 J/cm @Temperature 23.0 Â°C	35.6 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; ISO 180
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
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	ASTM D696
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; ASTM D648
	136 Â°C	277 Â°F	Annealed; ISO 75-2/A; ASTM D648
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
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	

Optical Properties	Metric	English	Comments
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Refractive Index Optical Properties	1.586 Metric	1.586 English	ASTM D542; ISO 489 Comments
Haze	0.60 %	0.60 %	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	
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	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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