

Styron CALIBRE[®],ç 200-3 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBRE[®],ç 200-3 polycarbonate resin is produced in compliance with the US Food and Drugs Administration (FDA) and EU food contact regulation. This resin provides excellent impact resistance, heat distortion resistance and optical clarity as well as high melt strength for sheet extrusion applications. Available in natural color only
 Main Characteristics: US FDA 21 CFR 177.1580CSANSF Underwriters Laboratory (UL) EU food contact 200/72/EC Applications: Small appliances Sheet and profile extrusion Housewares Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-200-3-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 Å°C	@Temperature 73.4 Å°F	
Linear Mold Shrinkage, Flow	0.15 %	0.15 %	ISO 62; ASTM D570
	@Temperature 23.0 Å°C, Time 86400 sec	@Temperature 73.4 Å°F, Time 24.0 hour	
Melt Flow	3.0 g/10 min	3.0 g/10 min	ASTM D1238; 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	74	74	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength at Break	72.0 MPa	10400 psi	ISO 527-2/50
	72.4 MPa	10500 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ISO 527-2/50; ASTM D638
Elongation at Break	150 %	150 %	50 mm/min; ISO 527-2/50; ASTM D638
Tensile Modulus	2.48 GPa	360 ksi	50 mm/min; ISO 527-2/50; ASTM D638
Flexural Strength	96.0 MPa	13900 psi	3-point; ISO 178

Mechanical Properties	Metric	English	Comments
	96.8 MPa	14000 psi	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; ISO 178; ASTM D790
Izod Impact, Notched	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	ASTM D256
Izod Impact, Notched (ISO)	93.0 kJ/mÂ² @Temperature 23.0 Â°C	44.3 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
Tensile Impact Strength	630 kJ/mÂ²	300 ft-lb/inÂ²	ASTM D1822
Dart Drop, Total Energy	93.8 J	69.2 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)	146 Â°C	295 Â°F	Annealed; ISO 75-2/B; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	132 Â°C	270 Â°F	Unannealed; ASTM D648; ISO 75-2/A
	143 Â°C	289 Â°F	Annealed; ASTM D648; ISO 75-2/A
Vicat Softening Point	151 Â°C @Load 5.10 kg	304 Â°F @Load 11.2 lb	Rate A (50Â°C/h); ISO 306/B50; ASTM D1525
Flammability, UL94	HB @Thickness 1.60 mm	HB @Thickness 0.0630 in	
	HB @Thickness 3.20 mm	HB @Thickness 0.126 in	
Oxygen Index	26 %	26 %	ISO 4289-2

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	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	
Dielectric Strength	3.0	3.0	ASTM D150
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	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	
Dissipation Factor	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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