

## Styron CALIBRE<sup>®</sup>,ç 200-6 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

**Overview:** CALIBRE<sup>®</sup>,ç 200-6 polycarbonate resins are produced in compliance with the US Food and Drug Administration (FDA) and EU food contact regulations. They provide excellent impact resistance, heat distortion resistance and optical clarity as well as high melt strength for sheet extrusion applications. The CALIBRE<sup>®</sup>,ç 200-6 series products are available in 4 additive packages: CALIBRE<sup>®</sup>,ç 200: No mold release or UV Stabilizer. CALIBRE<sup>®</sup>,ç 201: Mold release. CALIBRE<sup>®</sup>,ç 202: UV stabilizer. CALIBRE<sup>®</sup>,ç 203: Mold release and UV stabilizer. (Note that CALIBRE 202 and 203 grades are not available in Europe and do not comply with EU food contact regulations)  
**Applications:** Food and processor housings Beverage containers/service ware Small & large appliances Liquid containers Custom sheet Packaging applications Govt. and Industry Standards: US FDA 21 CFR 177.1580 Underwriters Laboratory (UL) CSA EU food contact 2002/72/EC Information provided by Styron

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Styron-CALIBRE-200-6-Polycarbonate-Resin.php](http://www.lookpolymers.com/polymer_Styron-CALIBRE-200-6-Polycarbonate-Resin.php)

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ISO 1183/A; 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	6.0 g/10 min	6.0 g/10 min	ISO 1133; ASTM D1238
	@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	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; ASTM D638
Elongation at Break	150 %	150 %	50 mm/min; ASTM D638

Elongation at Yield Mechanical Properties	6.0 % Metric	6.0 % English	50 mm/min; ASTM D638; ISO 527-2/11 Comments
Tensile Modulus	2.30 GPa	334 ksi	ISO 527-2/50
	2.41 GPa	350 ksi	50 mm/min; ASTM D638
Flexural Strength	96.5 MPa	14000 psi	Method I (3 point load), 2.0 mm/min; ASTM D790
	97.0 MPa	14100 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	9.10 J/cm @Temperature 23.0 Â°C	17.0 ft-lb/in @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	ISO 180
Tensile Impact Strength	588 kJ/mÂ²	280 ft-lb/inÂ²	ASTM D1822
Dart Drop, Total Energy	90.4 J	66.7 ft-lb	3.39 m/sec; ASTM D3763
Abrasion	45	45	[%] Taber; ASTM D1004

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
Hot Ball Pressure Test	125 Â°C	257 Â°F	IEC 60335-1
Deflection Temperature at 0.46 MPa (66 psi)	145 Â°C	293 Â°F	Annealed; ASTM D648
	146 Â°C	295 Â°F	Annealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	126 Â°C	259 Â°F	Annealed; ISO 75-2/A
	129 Â°C	264 Â°F	Unannealed; ASTM D648
	142 Â°C	288 Â°F	Unannealed; ASTM D648

Thermal Properties	143 Å°C Metric	289 Å°F English	Annealed: ISO 75-2/A Comments
Vicat Softening Point	151 Å°C @Load 5.10 kg	304 Å°F @Load 11.2 lb	Rate A (50Å°C/h); ASTM D1525; ISO 360/B50
Flammability, UL94	HB @Thickness 1.59 mm	HB @Thickness 0.0626 in	
	HB @Thickness 3.20 mm	HB @Thickness 0.126 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
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
Comparative Tracking Index	250 V @Thickness 2.00 mm	250 V @Thickness 0.0787 in	Solution A; IEC 60112

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

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