

Styron CALIBRE[®],ç 302V-6 LD Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBRE[®],ç 302V-6 LD HC18010009 Polycarbonate is an opalescent white extrusion-grade resin containing a proprietary light diffusion package that offers an excellent combination of light transmission. Light diffusion and whiteness for electronic signage and lighting applications and has been specifically designed to be used with LED light sources. CLAIBRE 302V-6 LD HC18010009 is UV stabilized, has outstanding impact resistance, heat distortion resistance, and meets UL 94 V-2 ratingApplications:LED back-lit sign faces and channel lettersComplies with:CSA (Canadian Standards Association)UL (Underwriters Laboratory, Inc.)Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-302V-6-LD-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	
Linear Mold Shrinkage, Flow	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	5.6 g/10 min	5.6 g/10 min	ISO 1133
	@Load 1.20 kg, Temperature 300 Â°C	@Load 2.65 lb, Temperature 572 Â°F	
	6.0 g/10 min	6.0 g/10 min	ASTM D1238
	@Load 1.20 kg, Temperature 300 Â°C	@Load 2.65 lb, Temperature 572 Â°F	

Mechanical Properties	Metric	English	Comments
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	130 %	130 %	50 mm/min; ASTM D638
Elongation at Yield	6.0 %	6.0 %	50 mm/min; ASTM D638
Tensile Modulus	2.31 GPa	335 ksi	50 mm/min; ISO 527-2/50; ASTM D638

Mechanical Properties	Metric	English	Comments
Flexural Strength	91.7 MPa	13300 psi	Method I (3 point load), 2.0 mm/min; ISO 178
Flexural Modulus	2.31 GPa	335 ksi	Method I (3 point load), 2.0 mm/min; ISO 178; ASTM D790
Izod Impact, Notched	9.60 J/cm @Temperature 23.0 Â°C	18.0 ft-lb/in @Temperature 73.4 Â°F	ASTM D256
Izod Impact, Notched (ISO)	94.0 kJ/mÂ² @Temperature 23.0 Â°C	44.7 ft-lb/inÂ² @Temperature 73.4 Â°F	ISO 180/4A
Izod Impact, Unnotched (ISO)	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	ASTM D256; ISO 180

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.0 Âµm/m-Â°C	37.8 Âµin/in-Â°F	ASTM D696
Deflection Temperature at 1.8 MPa (264 psi)	126 Â°C	259 Â°F	Unannealed; ASTM D648
	139 Â°C	282 Â°F	Annealed; ASTM D648
Flammability, UL94	V-2 @Thickness 1.60 mm	V-2 @Thickness 0.0630 in	
	V-2 @Thickness 3.20 mm	V-2 @Thickness 0.126 in	

Optical Properties	Metric	English	Comments
Transmission, Visible	25 % @Wavelength 4500 nm	25 % @Wavelength 4500 nm	ASTM D1003
	35 % @Wavelength 3200 nm	35 % @Wavelength 3200 nm	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

Electrical Properties	Metric	English	Comments
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	ASTM D150
Dielectric Strength	17.0 kV/mm	432 kV/in	ASTM D149
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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