

Styron CALIBRE 301V-6 Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Overview: CALIBRE 301V-6 Polycarbonate resins offer exceptional impact resistance and heat distortion resistance, and meets UL94 V-2 rating. CALIBRE 301V-6 contains a mold release agent and is available in opaque colors. Govt. and Industry Standards: CSA (Canadian Standards Association) Underwriters Laboratory Inc. (UL) Applications: Electronic components Automotive Lighting Storage Media Housings Information provided by Styron

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-301V-6-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	0.25 %	0.25 %	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	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	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	6.0 %	6.0 %	50 mm/min; ISO 527-2/50; ASTM D638
Tensile Modulus	2.41 GPa	350 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	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)	88.0 kJ/mÂ² @Temperature 23.0 Â°C	41.9 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	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 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)	142 Â°C	288 Â°F	Annealed; ISO 75-2/B; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	122 Â°C	252 Â°F	Unannealed; ISO 75-2/B; ASTM D648
	139 Â°C	282 Â°F	Annealed; ISO 75-2/B; ASTM D648
Vicat Softening Point	148 Â°C @Load 5.10 kg	298 Â°F @Load 11.2 lb	Rate A (50Â°C/h); ISO 306/B50; ASTM D1525
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	
Oxygen Index	26 %	26 %	ISO 4289-2

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	2.00e+17 ohm-cm Metric	2.00e+17 ohm-cm English	ASTM D257 Comments
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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