

Styron CALIBRE[®],ç 2060-6 Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

CALIBRE[®],ç 2060-6 resin is designed for medical applications which use steam or ethylene oxide for sterilization. This material has excellent retention of physical properties and optical clarity when exposed to ethylene oxide. For those applications which use steam sterilization or autoclaving, CALIBRE[®],ç 2060-6 resin offers superior hydrolytic stability for a polycarbonate resin. Applications: Medical packaging Rigid transparent tubing Thin gage flexible film Transparent sheet Information provided by Dow This product line was spun off from Dow Chemical to Styron in 2010.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-2060-6-Polycarbonate.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	6.0 g/10 min @Load 1.20 kg, Temperature 300 Â°C	6.0 g/10 min @Load 2.65 lb, Temperature 572 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	73	73	ASTM D785
Hardness, Rockwell R	118	118	ASTM D785
Tensile Strength, Ultimate	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
Tensile Modulus	2.41 GPa	350 ksi	50 mm/min; ASTM D638
Flexural Strength	96.5 MPa	14000 psi	3-points, 2 mm/min; ASTM D790
Flexural Modulus	2.41 GPa	350 ksi	3-points, 2 mm/min; ASTM D790
Izod Impact, Notched	9.08 J/cm	17.0 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256
Tensile Impact	149 J/cm	280 ft-lb/in	ASTM D1822
Dart Drop, Total Energy	90.0 J	66.4 ft-lb	8000 ipm; ASTM D3763
Abrasion	45	45	[%] Taber Abrasion Resistance - Δ; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear	68.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	38.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM D696
	@Temperature -40.0 - 82.2 $\text{Å}^\circ\text{C}$	@Temperature -40.0 - 180 $\text{Å}^\circ\text{F}$	
Deflection Temperature at 0.46 MPa (66 psi)	145 $\text{Å}^\circ\text{C}$	293 $\text{Å}^\circ\text{F}$	annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	129 $\text{Å}^\circ\text{C}$	265 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	142 $\text{Å}^\circ\text{C}$	288 $\text{Å}^\circ\text{F}$	
Vicat Softening Point	157 $\text{Å}^\circ\text{C}$	314 $\text{Å}^\circ\text{F}$	50 $\text{Å}^\circ\text{C}/\text{hr}$, 50N; ASTM D1525
Flammability Test	1.0	1.0	[in] Average Extent of Burning; ASTM D635
Oxygen Index	26 %	26 %	ISO 4589-2

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	transparent; thickness not quantified

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 Hz	@Frequency 60 Hz	
Dielectric Strength	3.0	3.0	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dissipation Factor	0.0010	0.0010	ASTM D150
	@Frequency 60 Hz	@Frequency 60 Hz	
	0.0020	0.0020	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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