

## Styron CALIBRE<sup>®</sup>,ç 2061-22 Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC)

### Material Notes:

CALIBRE<sup>®</sup>,ç 2061-22 resin is used in applications involving steam or ethylene oxide for sterilization - though suitability for use in these applications is dependent upon autoclave cycle times and temperatures. 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-2061-22-Polycarbonate.php](http://www.lookpolymers.com/polymer_Styron-CALIBRE-2061-22-Polycarbonate.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.15 %	0.15 %	23Â°C, 24hrs; ASTM D570
Water Absorption at Saturation	0.32 %	0.32 %	23Â°C, 50% RH; ASTM D570
Linear Mold Shrinkage	0.0050 - 0.0070 cm/cm	0.0050 - 0.0070 in/in	ASTM D955
Melt Flow	22 g/10 min @Load 1.20 kg, Temperature 300 Â°C	22 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	65.5 MPa	9500 psi	50 mm/min; ASTM D638
Tensile Strength, Yield	60.0 MPa	8700 psi	50 mm/min; ASTM D638
Elongation at Break	120 %	120 %	50 mm/min; ASTM D638
Tensile Modulus	2.34 GPa	340 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	7.47 J/cm	14.0 ft-lb/in	ASTM D256
Izod Impact, Unnotched	NB	NB	ASTM D256
Tensile Impact	96.1 J/cm	180 ft-lb/in	ASTM D1822
Dart Drop, Total Energy	72.0 J	53.1 ft-lb	8000 ipm; ASTM D3763
Abrasion	45	45	[%] Taber Abrasion Resistance -

Mechanical Properties	Metric	English	Comments
			&Delta;: ASTM D1044
Thermal Properties	Metric	English	Comments
CTE, linear	68.4 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$ @Temperature -40.0 - 82.2 $\text{Å}^\circ\text{C}$	38.0 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$ @Temperature -40.0 - 180 $\text{Å}^\circ\text{F}$	ASTM D696
Deflection Temperature at 0.46 MPa (66 psi)	142 $\text{Å}^\circ\text{C}$	288 $\text{Å}^\circ\text{F}$	annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	126 $\text{Å}^\circ\text{C}$	258 $\text{Å}^\circ\text{F}$	unannealed; ASTM D648
	139 $\text{Å}^\circ\text{C}$	282 $\text{Å}^\circ\text{F}$	annealed; ASTM D648
Vicat Softening Point	152 $\text{Å}^\circ\text{C}$	306 $\text{Å}^\circ\text{F}$	50 $\text{Å}^\circ\text{C}/\text{hr}$ , 50N; ASTM D1525

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542
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 Hz	3.0 @Frequency 60 Hz	ASTM D150
	3.0 @Frequency 1e+6 Hz	3.0 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	16.5 kV/mm	420 kV/in	ASTM D149
Dissipation Factor	0.0010 @Frequency 60 Hz	0.0010 @Frequency 60 Hz	ASTM D150
	0.0020 @Frequency 1e+6 Hz	0.0020 @Frequency 1e+6 Hz	ASTM D150

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