

## Styron CALIBRE™ 300EP 22 Polycarbonate, General Purpose

Categories: [Polymer](#); [Thermoplastic](#); [Polycarbonate \(PC\)](#); [Polycarbonate, Unreinforced, Flame Retardant](#)

**Material Notes:** CALIBRE® 300EP series resins are general purpose polycarbonate resins and can be supplied with a mold release package, a UV stabilizer package or both. CALIBRE 300EP resins exhibit an excellent physical property balance of heat resistance, transparency and impact strength. The CALIBRE 300EP resins have a UL-94 rating of V-2(1). In addition the high melt flow rate allows complex parts to be easily molded.

The CALIBRE 300EP series resins are typically used for appliances, storage media housings, electrical components and lighting.

Available Melt Flow Rate: 22.

Associated products:

CALIBRE 300EP: without a mold release and UV stabilization package

CALIBRE 301EP: including a mold release package

CALIBRE 302EP: including a UV stabilizer package

CALIBRE 303EP: including a mold release and UV stabilizer package.

(1) These numerical flame spread ratings are small scale test values and are not intended to reflect hazards presented by these or any other materials under actual fire conditions.

Ignition resistant chemical additives increase resistance to burning from minor flame sources and permit properly manufactured end products to meet the requirements of certain flammability tests, but resins will burn rapidly under the right conditions of heat and oxygen feed.

Data provided by Dow Chemical.

This product line was spun off from Dow Chemical to Styron in 2010.

**Key Words:** PC

**Vendors:** No vendors are listed for this material. Please [click here](#) if you are a supplier and would like information on how to add your listing to this material.

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in <sup>3</sup>	ASTM Data
Melt Density	1.01 g/cc	0.0365 lb/in <sup>3</sup>	Melt density
Water Absorption	0.15 %	0.15 %	
Moisture Absorption at Equilibrium	0.32 %	0.32 %	Humidity Absorption
Linear Mold Shrinkage	0.0060 cm/cm	0.0060 in/in	
Melt Flow	22 g/10 min @Load 1.20 kg, Temperature 300 °C	22 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM Data

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	118	118	
Tensile Strength, Ultimate	65.5 MPa	9500 psi	ASTM Data
Tensile Strength, Yield	62.1 MPa	9010 psi	ASTM Data
Elongation at Break	120 %	120 %	ASTM Data
Elongation at Yield	6.0 %	6.0 %	ISO Data
Tensile Modulus	2.34 GPa	339 ksi	ASTM Data
Izod Impact, Notched	7.47 J/cm	14.0 ft-lb/in	ASTM Data
Izod Impact, Unnotched	NB	NB	ASTM Data
Charpy Impact Unnotched	NB	NB	ISO Data
Charpy Impact, Notched	1.10 J/cm <sup>2</sup>	5.24 ft-lb/in <sup>2</sup>	ISO Data, Low Temp
	7.00 J/cm <sup>2</sup>	33.3 ft-lb/in <sup>2</sup>	ISO Data
Tensile Impact Strength	378 kJ/m <sup>2</sup>	180 ft-lb/in <sup>2</sup>	ASTM Data
Impact Test	72.3 J	53.3 ft-lb	Instrumented Dart Total Energy, 23°C

Electrical Properties	Metric	English	Comments
Electrical Resistivity	2.00e+17 ohm-cm	2.00e+17 ohm-cm	ASTM Data
Dielectric Constant 	2.93 @Frequency 60 Hz	2.93 @Frequency 60 Hz	ASTM Data
	2.93 @Frequency 1e+6 Hz	2.93 @Frequency 1e+6 Hz	ASTM Data
Dielectric Strength	16.5 kV/mm	419 kV/in	
Dissipation Factor 	0.00050 @Frequency 60 Hz	0.00050 @Frequency 60 Hz	
	0.0017 @Frequency 1e+6 Hz	0.0017 @Frequency 1e+6 Hz	ASTM Data

Metric	English
68.4 µm/m-°C @Temperature 20.0 °C	38.0 µin/in-°F @Temperature 68.0 °F

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Specific Heat Capacity	1.96 J/g-°C	0.468 BTU/lb-°F	
Thermal Conductivity	0.207 W/m-K	1.44 BTU-in/hr-ft <sup>2</sup> -°F	
Deflection Temperature at 1.8 MPa (264 psi)	126 °C	259 °F	Unannealed; ASTM Data
Vicat Softening Point	152 °C	306 °F	
Flammability, UL94	V-2 @Thickness 3.20 mm	V-2 @Thickness 0.126 in	
Oxygen Index	26 %	26 %	
<b>Optical Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
Haze	1.1 %	1.1 %	
Transmission, Visible	89 %	89 %	

Some of the values displayed above may have been converted from their original units and/or rounded in order to display the information in a consistent format. Users requiring more precise data for scientific or engineering calculations can click on the property value to see the original value as well as raw conversions to equivalent units. We advise that you only use the original value or one of its raw conversions in your calculations to minimize rounding error. We also ask that you refer to MatWeb's [terms of use](#) regarding this information. [Click here](#) to view all the property values for this datasheet as they were originally entered into MatWeb.

