

Styron CALIBRE® 701 15 Polycarbonate, General Purpose

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Unreinforced, Flame Retardant

Material Notes:

CALIBRE® 701 series polycarbonate resins are a general purpose, transparent, ignition resistant grades equipped with a mold release package. The CALIBRE 701 series resins exhibit a high heat resistance, high clarity and are rated V-0 at 3.2 mm according to UL-94(1). The CALIBRE 701 resins are typically used in applications like electrical components and in building and construction areas due to the increasing ignition resistance requirements. Available Melt Flow Rate: 15.(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.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Styron-CALIBRE-701-15-Polycarbonate-General-Purpose.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM Data
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	15 g/10 min @Load 1.20 kg, Temperature 300 °C	15 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM Data

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	123	123	
Tensile Strength, Ultimate	65.5 MPa	9500 psi	ASTM Data
Tensile Strength, Yield	60.7 MPa	8800 psi	ASTM Data
Elongation at Break	120 %	120 %	ASTM Data
Tensile Modulus	2.24 GPa	325 ksi	ASTM Data
Izod Impact, Notched	8.54 J/cm	16.0 ft-lb/in	ASTM Data
Izod Impact, Unnotched	NB	NB	ASTM Data
Tensile Impact Strength	462 kJ/m ²	220 ft-lb/in ²	ASTM Data
Impact Test	79.1 J	58.3 ft-lb	Instrumented Dart Total Energy

Mechanical Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.4 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$ @Temperature 23.0 $^\circ\text{C}$	38.0 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$ @Temperature 73.4 $^\circ\text{F}$	ASTM data
Deflection Temperature at 1.8 MPa (264 psi)	127 $^\circ\text{C}$	261 $^\circ\text{F}$	Unannealed; ASTM Data
Vicat Softening Point	154 $^\circ\text{C}$	309 $^\circ\text{F}$	
Flammability, UL94	V-0 @Thickness 3.20 mm	V-0 @Thickness 0.126 in	
Oxygen Index	41 %	41 %	

Optical Properties	Metric	English	Comments
Haze	1.1 %	1.1 %	
Transmission, Visible	86 %	86 %	

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