

Styron CALIBRE® 7101 15 Polycarbonate, 10% Glass Reinforced

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Glass Fiber Filled, Flame Retardant

Material Notes:

CALIBRE® 7101 is a 10% glass reinforced ignition resistant polycarbonate resin equipped with a mold release package for optimal processing. The CALIBRE 7101 resins exhibit a high modulus, exceptional dimensional stability and are rated V-0 at 1.6 mm according to UL-94(1). CALIBRE 7101 polycarbonate resins are typically used for electrical boxes, lighting components and electrical switch connectors. Available Melt Flow Rates: 8, 10, 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-7101-15-Polycarbonate-10-Glass-Reinforced.php

Physical Properties	Metric	English	Comments
Density	1.27 g/cc	0.0459 lb/in ³	ASTM Data
Water Absorption	0.15 %	0.15 %	
Moisture Absorption at Equilibrium	0.25 %	0.25 %	Humidity Absorption
Linear Mold Shrinkage	0.0040 cm/cm	0.0040 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	122	122	
Tensile Strength, Ultimate	62.7 MPa	9090 psi	ASTM Data
Tensile Strength, Yield	60.0 MPa	8700 psi	ASTM Data
Elongation at Break	4.0 %	4.0 %	ASTM Data
Elongation at Yield	4.0 %	4.0 %	ISO Data
Tensile Modulus	3.65 GPa	529 ksi	ASTM Data
Izod Impact, Notched	1.07 J/cm	2.00 ft-lb/in	ASTM Data
Izod Impact, Unnotched	0.400 J/cm	0.749 ft-lb/in	ASTM Data
Tensile Impact Strength	147 kJ/m ²	69.9 ft-lb/in ²	ASTM Data

Mechanical Properties	Metric	English	Comments
Impact Test	33.9 J @Temperature 23.0 Â°C	75.0 lb @Temperature 73.4 Â°F	Instrumented Dart Total Energy

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	37.8 Âµm/m-Â°C @Temperature 20.0 Â°C	21.0 Âµin/in-Â°F @Temperature 68.0 Â°F	ASTM data
Deflection Temperature at 0.46 MPa (66 psi)	149 Â°C	300 Â°F	Unannealed; ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	141 Â°C	286 Â°F	Unannealed; ASTM Data
Vicat Softening Point	160 Â°C	320 Â°F	
Flammability, UL94	V-0 @Thickness 3.20 mm	V-0 @Thickness 0.126 in	V-0/5V; UL94
Oxygen Index	38 %	38 %	

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