

Styron CALIBRE® 5051 15 Polycarbonate, 5% Glass Reinforced

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

Material Notes:

CALIBRE® 5051 is a 5% glass reinforced polycarbonate resin containing mold release for optimal processing. CALIBRE 5051 polycarbonate resin exhibits high modulus and excellent dimensional stability. CALIBRE 5051 polycarbonate resin is typically used for in electrical market applications such as electrical boxes, lighting components and electrical connectors. Available Melt Flow Rate: 15. 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-5051-15-Polycarbonate-5-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	48.3 MPa	7010 psi	ASTM Data
Tensile Strength, Yield	60.0 MPa	8700 psi	ASTM Data
Elongation at Break	8.0 %	8.0 %	ASTM Data
Tensile Modulus	3.10 GPa	450 ksi	ASTM Data
Izod Impact, Notched	1.60 J/cm	3.00 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
Impact Test	46.3 J @Temperature 23.0 °C	34.1 ft-lb @Temperature 73.4 °F	Instrumented Dart Total Energy

Thermal Properties	Metric	English	Comments
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Thermal Properties CTE, linear, Parallel to Flow	37.8 Åum/m-Å°C Metric	21.0 Åuin/in-Å°F English	Comments ASTM data
	@Temperature 20.0 Å°C	@Temperature 68.0 Å°F	
Deflection Temperature at 0.46 MPa (66 psi)	149 Å°C	300 Å°F	Unannealed; ASTM Data
Deflection Temperature at 1.8 MPa (264 psi)	141 Å°C	286 Å°F	Unannealed; ASTM Data
Vicat Softening Point	160 Å°C	320 Å°F	
Flammability, UL94	V-0	V-0	
	@Thickness 3.20 mm	@Thickness 0.126 in	
Oxygen Index	32 %	32 %	

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