

Styron CALIBRE® 891 20 Polycarbonate, General Purpose

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

Material Notes:

CALIBRE® 890 series polycarbonate resins are a general purpose, superior ignition resistant grade equipped with a mold release package. The CALIBRE 890 series resins exhibit a high heat resistance, high impact and are rated V-0 at 1.6 mm, 5V at 3.2 mm according to UL-94(1). The CALIBRE 890 series resins are typically used in building and construction and in business equipment applications. Available Melt Flow Rates: 10, 20 Associated products: CALIBRE 891: including a mold release package CALIBRE 893: including a mold release and UV stabilizer package. 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-891-20-Polycarbonate-General-Purpose.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM Data
Melt Density	1.13 g/cc	0.0408 lb/in ³	Melt density
Linear Mold Shrinkage	0.0060 cm/cm	0.0060 in/in	
Melt Flow	20 g/10 min @Load 1.20 kg, Temperature 300 °C	20 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	58.6 MPa	8500 psi	ASTM Data
Tensile Strength, Yield	60.0 MPa	8700 psi	ISO Data
Elongation at Break	115 %	115 %	ASTM Data
Elongation at Yield	6.0 %	6.0 %	ISO Data
Tensile Modulus	2.38 GPa	345 ksi	ASTM Data
Izod Impact, Notched	6.94 J/cm	13.0 ft-lb/in	ASTM Data
Charpy Impact, Notched	1.50 J/cm ²	7.14 ft-lb/in ²	ISO Data, Low Temp
	3.00 J/cm ²	14.3 ft-lb/in ²	ISO Data

Mechanical Properties Impact Test	62.2 J Metric	45.9 ft-lb English	Comments Instrumented Dart Total Energy
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	68.4 Âµm/m-Â°C @Temperature 20.0 Â°C	38.0 Âµin/in-Â°F @Temperature 68.0 Â°F	ASTM data
Specific Heat Capacity	2.10 J/g-Â°C	0.502 BTU/lb-Â°F	
Thermal Conductivity	0.244 W/m-K	1.69 BTU-in/hr-ftÂ²- Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	127 Â°C	261 Â°F	Unannealed; ASTM Data
Vicat Softening Point	151 Â°C	304 Â°F	
Flammability, UL94	5VA @Thickness 3.20 mm	5VA @Thickness 0.126 in	UL94
Oxygen Index	36 %	36 %	

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