

Styron CALIBRE® 200 4 Polycarbonate, General Purpose

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

Material Notes:

CALIBRE® 200 series are general purpose, UL listed Polycarbonate resins formulated to comply with the applicable FDA and European regulations governing food contact(1). CALIBRE 200 series resins exhibit an excellent physical property balance of heat resistance, transparency and impact strength. The CALIBRE 200 series can be supplied with a mold release package, a UV stabilizer package or both. The CALIBRE 200 series resins are typically used for food processors, liquid containers and food utensils. Available Melt Flow Rates: 4, 6, 10, 15, 22. Associated products: CALIBRE 200: without a mold release and UV stabilization package CALIBRE 201: including a mold release package CALIBRE 202: including a UV stabilizer package CALIBRE 203: including a mold release and UV stabilizer package.(1) When used unmodified for the manufacture of food contact articles CALIBRE 200 series Polycarbonate resins comply with the U.S. Food, Drug and Cosmetic Act and Food Additive Regulations 21 CFR 177.1580 and most European regulations. The regulations should be consulted for complete details. 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-200-4-Polycarbonate-General-Purpose.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ASTM Data
Melt Density	1.03 g/cc	0.0372 lb/in ³	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	4.0 g/10 min @Load 1.20 kg, Temperature 300 °C	4.0 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	72.4 MPa	10500 psi	ASTM Data
Tensile Strength, Yield	62.1 MPa	9010 psi	ASTM Data
Elongation at Break	150 %	150 %	ASTM Data
Elongation at Yield	6.0 %	6.0 %	ISO Data
Tensile Modulus	2.48 GPa	360 ksi	ASTM Data
Izod Impact, Notched	9.61 J/cm	18.0 ft-lb/in	ASTM Data

Izod Impact, Unnotched Mechanical Properties	NB Metric	NB English	ASTM Data Comments
Charpy Impact Unnotched	NB	NB	ISO Data
	NB	NB	ISO Data, Low Temp
Charpy Impact, Notched	1.50 J/cmÂ²	7.14 ft-lb/inÂ²	ISO Data, Low Temp
	10.0 J/cmÂ²	47.6 ft-lb/inÂ²	ISO Data
Tensile Impact Strength	631 kJ/mÂ²	300 ft-lb/inÂ²	ASTM Data
Impact Test	93.8 J @Temperature 23.0 Â°C	69.2 ft-lb @Temperature 73.4 Â°F	Instrumented Dart Total Energy

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	2.04 J/g-Â°C	0.488 BTU/lb-Â°F	
Thermal Conductivity	0.260 W/m-K	1.80 BTU-in/hr-ftÂ²- Â°F	
Deflection Temperature at 1.8 MPa (264 psi)	132 Â°C	270 Â°F	Unannealed; ASTM Data
Vicat Softening Point	158 Â°C	316 Â°F	
Flammability, UL94	V-2 @Thickness 3.20 mm	V-2 @Thickness 0.126 in	
Oxygen Index	26 %	26 %	

Optical Properties	Metric	English	Comments
Haze	1.1 %	1.1 %	
Transmission, Visible	89 %	89 %	

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	2.93	ASTM Data

Electrical Properties	@Frequency 1e+6 Hz Metric	@Frequency 1e+6 Hz English	Comments
Dielectric Strength	16.5 kV/mm	419 kV/in	
Dissipation Factor	0.00050	0.00050	
	@Frequency 60 Hz	@Frequency 60 Hz	
	0.0017	0.0017	ASTM Data
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

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