

## CALIBRE™ 893-10 Polycarbonate Resin

### Overview

CALIBRE™ 891-10 Series provides superior ignition resistance in opaque applications. The CALIBRE 891-10 series products are available in 2 additive packages: CALIBRE 891: Mold release, CALIBRE 893: Mold release and UV stabilizer.

Main Characteristics:

- Underwriters Laboratory Inc. (UL)

Applications:

- Electronics
- Business equipment
- Appliances

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm <sup>3</sup>	1.20 g/cm <sup>3</sup>	ASTM D792 ISO 1183/A
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10 g/10 min	10 g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955 ISO 294-4
Water Absorption			
24 hr, 73°F (23°C)	0.15 %	0.15 %	ASTM D570
73°F (23°C), 24 hr	0.15 %	0.15 %	ISO 62
Outdoor Suitability	f1	f1	UL 746C
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
-- <sup>1</sup>	345000 psi	2380 MPa	ASTM D638
--	345000 psi	2380 MPa	ISO 527-2/50
Tensile Strength			
Yield <sup>1</sup>	8900 psi	61.4 MPa	ASTM D638
Yield	8850 psi	61.0 MPa	ISO 527-2/50
Break <sup>1</sup>	8500 psi	58.6 MPa	ASTM D638
Break	8560 psi	59.0 MPa	ISO 527-2/50
Tensile Elongation			
Break <sup>1</sup>	120 %	120 %	ASTM D638
Break	120 %	120 %	ISO 527-2/50
Flexural Modulus			
-- <sup>2</sup>	338000 psi	2330 MPa	ASTM D790
-- <sup>3,4</sup>	338000 psi	2330 MPa	ISO 178
Flexural Strength			
-- <sup>2</sup>	14200 psi	97.9 MPa	ASTM D790
-- <sup>3,4</sup>	14200 psi	98.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			
73°F (23°C)	13 ft-lb/in	690 J/m	ASTM D256
73°F (23°C)	32 ft-lb/in <sup>2</sup>	68 kJ/m <sup>2</sup>	ISO 180/A
Instrumented Dart Impact <sup>5</sup>			ASTM D3763
73°F (23°C), Total Energy	550 in-lb	62.1 J	
Tensile Impact Strength	300 ft-lb/in <sup>2</sup>	630 kJ/m <sup>2</sup>	ASTM D1822

<b>Hardness</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Rockwell Hardness			ASTM D785
M-Scale	59	59	
R-Scale	123	123	
<b>Thermal</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Annealed	279 °F	137 °C	
264 psi (1.8 MPa), Unannealed	260 °F	127 °C	
Vicat Softening Temperature	304 °F	151 °C	ASTM D1525 <sup>6</sup>
CLTE - Flow	3.6E-5 in/in/°F	6.5E-5 cm/cm/°C	ASTM D696
<b>Flammability</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Flame Rating <sup>7</sup>			UL 94
0.06 in (1.6 mm)	V-0	V-0	
0.13 in (3.2 mm)	• V-0 • 5VA	• V-0 • 5VA	
Oxygen Index <sup>7</sup>	36 %	36 %	ASTM D2863