

CALIBRE™ 301-58 LT

Polycarbonate Resin

Overview CALIBRE™ 301-58 LT is a high light transmission, high-flow polycarbonate resin for injection molding applications.

Main Characteristics:

- High light transmission
- High flow for injection molding
- High purity

Applications:

- LED optics
- Light guides

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	58 g/10 min	58 g/10 min	ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ISO 294-4
Water Absorption (24 hr, 73°F (23°C))	0.20 %	0.20 %	ISO 62
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-2/50
Tensile Stress			ISO 527-2/50
Yield	8700 psi	60.0 MPa	
Break	6960 psi	48.0 MPa	
Tensile Strain			ISO 527-2/50
Yield	6.0 %	6.0 %	
Break	60 %	60 %	
Flexural Modulus ¹	363000 psi	2500 MPa	ISO 178
Flexural Stress ¹	14500 psi	100 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact Strength (73°F (23°C))	28 ft-lb/in ²	58 kJ/m ²	ISO 180/A
Unnotched Izod Impact Strength (73°F (23°C))	No Break	No Break	ISO 180
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Annealed	279 °F	137 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	255 °F	124 °C	ISO 75-2/A
264 psi (1.8 MPa), Annealed	273 °F	134 °C	ISO 75-2/A
Vicat Softening Temperature	297 °F	147 °C	ISO 306/B50
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.030 in (0.75 mm)	V-2	V-2	
Glow Wire Flammability Index ²			IEC 60695-2-12
0.04 in (1.0 mm)	1560 °F	850 °C	
0.08 in (2.0 mm)	1650 °F	900 °C	
0.12 in (3.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature ²			IEC 60695-2-13
0.04 in (1.0 mm)	1610 °F	875 °C	
0.08 in (2.0 mm)	1610 °F	875 °C	

Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index	1.583	1.583	ISO 489
Transmittance	> 90.0 %	> 90.0 %	ASTM D1003
Haze	< 1.00 %	< 1.00 %	ASTM D1003