

Technical Information



CALIBRE™ IM 401-11

Polycarbonate Resin

Overview

CALIBRE™ IM 401-11 Impact Modified Polycarbonate resin is available in opaque formulations that offer benefits ranging from superior low temperature impact strength to easy processing with improved impact strengths.

Main Characteristics:

- Impact modified
- Superior low temperature toughness

Applications:

- Automotive interiors
- Automotive exteriors
- Low temperature applications

Automotive Specifications

- FORD ESB-M4D100-C1
- GM GMP.PC.003

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.18 g/cm ³	1.18 g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	11 g/10 min	11 g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	6.0E-3 to 8.0E-3 in/in	0.60 to 0.80 %	ISO 294-4
Water Absorption			ISO 62
Saturation, 73°F (23°C)	0.32 %	0.32 %	
Equilibrium, 73°F (23°C), 50% RH	0.12 %	0.12 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			
Yield ¹	8100 psi	55.8 MPa	ASTM D638
Yield	8120 psi	56.0 MPa	ISO 527-2/50
Tensile Elongation			
Break ¹	130 %	130 %	ASTM D638
Break	130 %	130 %	ISO 527-2/50
Flexural Modulus			
--	331000 psi	2280 MPa	ASTM D790
-- ²	329000 psi	2270 MPa	ISO 178
Flexural Strength			
--	13000 psi	89.6 MPa	ASTM D790
-- ²	13100 psi	90.0 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
Tensile Impact Strength	300 ft-lb/in ²	630 kJ/m ²	ASTM D1822
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	250 °F	121 °C	
264 psi (1.8 MPa), Annealed	277 °F	136 °C	
Vicat Softening Temperature	295 °F	146 °C	ISO 306/B50 ASTM D1525 ³

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁴			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	4.0 hr	4.0 hr

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ 2.0 in/min (50 mm/min)

² 0.079 in/min (2.0 mm/min)

³ Rate A (50°C/h), Loading 2 (50 N)

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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