

CALIBRE™ IM 401-18

Polycarbonate Resin

Overview

CALIBRE™ IM 401-18 Impact Modified Polycarbonate resins is available in opaque formulations that offer benefits ranging from superior low temperature impact strength to easy processing with improved impact strength in highly filled formulations.

Main Characteristics:

- Impact modified
- Superior low temperature toughness

Applications:

- Automotive interiors
- Automotive exteriors
- Small & large appliances

Automotive Specifications

- CHRYSLER MS-DB-145 CPN3101 Color: Gray
- CHRYSLER MS-DB-145 Type A CPN4483 Color: Natural
- GM GMP.PC.004
- CHRYSLER MS-DB-145 Type A CPN3102 Color: Black
- FORD WSB-M4D627-A
- GM GMP.PC.016

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.18 g/cm ³	1.18 g/cm ³	ASTM D792 ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	18 g/10 min	18 g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	6.0E-3 to 8.0E-3 in/in	0.60 to 0.80 %	ASTM D955 ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength			
Yield ¹	8400 psi	57.9 MPa	ASTM D638
Yield	8410 psi	58.0 MPa	ISO 527-2/50
Tensile Elongation			
Break ¹	110 %	110 %	ASTM D638
Break	110 %	110 %	ISO 527-2/50
Flexural Modulus			
-- ²	330000 psi	2280 MPa	ASTM D790
-- ^{3, 4}	329000 psi	2270 MPa	ISO 178
Flexural Strength			
-- ²	13000 psi	89.6 MPa	ASTM D790
-- ^{3, 4}	13100 psi	90.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	12 ft-lb/in	640 J/m	ASTM D256 ISO 180/4A
Instrumented Dart Impact ⁵			ASTM D3763
73°F (23°C), Total Energy	450 in-lb	50.8 J	
Tensile Impact Strength	280 ft-lb/in ²	588 kJ/m ²	ASTM D1822

Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648 ISO 75-2/A
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 ⁶
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁷			UL 94
0.06 in (1.6 mm)	HB	HB	
0.13 in (3.2 mm)	HB	HB	

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 Method I (3 point load), 0.079 in/min (2.0 mm/min)

³ 0.079 in/min (2.0 mm/min)

⁴ 3-points

⁵ 11.1 ft/sec (3.39 m/sec)

⁶ Rate A (50°C/h), Loading 2 (50 N)

⁷ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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