



CALIBRE™ IM 401-11

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

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 strength in highly filled formulations.

Main Characteristics:

- Impact modified
- Superior low temperature toughness

Applications:

- Automotive interiors
- Automotive exteriors
- Small & large applications

General

Material Status	• Commercial: Active		
Availability	• Latin America	• North America	
Additive	• Impact Modifier		
Features	• Good Processability	• Impact Modified	
	• Good Toughness	• Low Temperature Impact Resistance	
Uses	• Automotive Applications	• Automotive Exterior Parts	• Automotive Interior Parts
Automotive Specifications	• FORD ESB-M4D100-C1	• GM GMP.PC.003	
Appearance	• Opaque		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.18		ASTM D792
Density	1.18	g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (300°C/1.2 kg)	11	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	11	g/10 min	ISO 1133
Molding Shrinkage - Flow	6.0E-3 to 8.0E-3	in/in	ASTM D955
Molding Shrinkage - Flow	0.60 to 0.80	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength ² (Yield)	8100	psi	ASTM D638
Tensile Stress (Yield)	8120	psi	ISO 527-2/50
Tensile Elongation ² (Break)	130	%	ASTM D638
Tensile Strain (Break)	130	%	ISO 527-2/50
Flexural Modulus ³	330000	psi	ASTM D790
Flexural Modulus ^{4, 5}	329000	psi	ISO 178
Flexural Strength ³	13000	psi	ASTM D790
Flexural Stress ^{4, 5}	13100	psi	ISO 178

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Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
73°F	13	ft-lb/in	ASTM D256
73°F	13	ft-lb/in	ISO 180/4A
Instrumented Dart Impact ⁶ (73°F, Total Energy)	500	in-lb	ASTM D3763
Tensile Impact Strength	300	ft-lb/in ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	250	°F	
Heat Deflection Temperature (264 psi, Unannealed)	250	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi, Annealed)	277	°F	ASTM D648
Heat Deflection Temperature (264 psi, Annealed)	277	°F	ISO 75-2/A
Vicat Softening Temperature	295	°F	ASTM D1525 ⁷
Vicat Softening Temperature	295	°F	ISO 306/B50
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁸			UL 94
0.06 in		HB	
0.13 in		HB	

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2.0 in/min

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

⁴ 0.079 in/min

⁵ 3-points

⁶ 11.1 ft/sec

⁷ Rate A (50°C/h), Loading 2 (50 N)

⁸ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.