



CALIBRE™ 301-15

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 300-15 Polycarbonate resins offer exceptional impact resistance, heat distortion resistance, and optical clarity. The CALIBRE 300-15 series products are available in 4 additive packages: CALIBRE 300: No mold release or UV Stabilizer. CALIBRE 301: Mold release. CALIBRE 302: UV stabilizer. CALIBRE 303: Mold release and UV stabilizer.

Govt. and Industry Standards:

- CSA (Canadian Standards Association)
- Underwriters Laboratory, Inc. (UL)

Applications:

- Automotive interiors
- Automotive exteriors
- Sheet applications
- Electrical lighting/switches
- Small & large appliances
- Beverage containers/serviceware
- Power equipment

General

Material Status	• Commercial: Active		
Availability	• Europe	• Latin America	• North America
Additive	• Mold Release		
Features	• High Clarity	• High Impact Resistance	
Uses	• Appliances • Automotive Applications • Automotive Exterior Parts	• Automotive Interior Parts • Containers • Electrical/Electronic Applications	• Lighting Applications • Sheet
Agency Ratings	• CSA Unspecified Rating		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ISO 1133
Melt volume-flow rate (300°C/1.2 kg)	14	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Water Absorption (24 hr, 73°F)	0.15	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.32	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	334000	psi	ISO 527-2/50
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Stress (Break)	10300	psi	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Strain (Break)	150	%	ISO 527-2/50
Flexural Modulus ³	348000	psi	ISO 178

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Mechanical	Nominal Value	Unit	Test Method
Flexural Stress ³	14100	psi	ISO 178
Taber Abrasion Resistance	45	%	ISO 9352
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	5.7	ft·lb/in ²	
73°F	12	ft·lb/in ²	
Notched Izod Impact Strength (73°F)	39	ft·lb/in ²	ISO 180/A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	73		
R-Scale	118		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Annealed)	289	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	255	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	284	°F	ISO 75-2/A
Vicat Softening Temperature	298	°F	ISO 306/B50
Ball Indentation Temperature	> 257	°F	IEC 60335-1
CLTE - Flow	3.9E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	430	V/mil	IEC 60243-1
Dielectric Constant			IEC 60250
60 Hz	3.00		
1 MHz	3.00		
Relative Permittivity			IEC 60250
100 Hz	3.00		
1 MHz	3.00		
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
1 MHz	2.0E-3		
Comparative Tracking Index (0.0787 in, Solution A)	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁴			UL 94
0.12 in	HB		
0.030 in	V-2		
0.06 in	V-2		
Glow Wire Flammability Index ⁴			IEC 60695-2-12
0.04 in	1650	°F	
0.08 in	1610	°F	
0.12 in	1610	°F	
Glow Wire Ignition Temperature ⁴			IEC 60695-2-13
0.04 in	1470	°F	
0.08 in	1430	°F	
0.12 in	1430	°F	
Oxygen Index ⁴	26	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ISO 489
Transmittance	89.0	%	ASTM D1003

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Optical	Nominal Value	Unit	Test Method
Haze	1.00	%	ASTM D1003

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
- ³ 0.079 in/min
- ⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.