

CALIBRE™ 301-15

Polycarbonate Resin

Trinseo

Message:

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 Information			
UL YellowCard	E54680-469960	E157291-238223	E206114-228275
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		
Multi-Point Data	Viscosity vs. Shear Rate (ASTM D3835)		
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)	14.0	cm ³ /10min	ISO 1133 ¹
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Water Absorption			ISO 62

23°C, 24 hr	0.15	%	
Equilibrium, 23°C, 50% RH	0.32	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	73		
R-Scale	118		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ISO 527-2/50
Tensile Stress			ISO 527-2/50
Yield	60.0	MPa	
Break	71.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	6.0	%	
Break	150	%	
Flexural Modulus ²	2400	MPa	ISO 178
Flexural Stress ³	97.0	MPa	ISO 178
Taber Abrasion Resistance	45	%	ISO 9352
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	12	kJ/m ²	
23°C	25	kJ/m ²	
Notched Izod Impact Strength (23°C)	83	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Annealed	143	°C	ISO 75-2/B
1.8 MPa, Unannealed	124	°C	ISO 75-2/A
1.8 MPa, Annealed	140	°C	ISO 75-2/A
Vicat Softening Temperature	148	°C	ISO 306/B50
Ball Indentation Temperature	> 125	°C	IEC 60335-1
CLTE - Flow	7.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Electric Strength	17	kV/mm	IEC 60243-1
Dielectric Constant			
60 Hz	3.00		IEC 60250
1 MHz	3.00		IEC 60250
100 Hz	3.00		IEC 60250
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
1 MHz	2.0E-3		
Comparative Tracking Index (2.00 mm, Solution A)	250	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁴			UL 94
3.00 mm	HB		
0.750 mm	V-2		
1.50 mm	V-2		
Glow Wire Flammability Index ⁵			IEC 60695-2-12
1.00 mm	900	°C	
2.00 mm	875	°C	
3.00 mm	875	°C	
Glow Wire Ignition Temperature ⁶			IEC 60695-2-13
1.00 mm	800	°C	
2.00 mm	775	°C	
3.00 mm	775	°C	
Oxygen Index ⁷	26	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ISO 489
Transmittance	89.0	%	ASTM D1003
Haze	1.0	%	ASTM D1003
NOTE			

1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
2.	2.0 mm/min
3.	2.0 mm/min
4.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
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