

CALIBRE™ 301-10

Polycarbonate Resin

Trinseo

Message:

CALIBRE™ 300-10 Polycarbonate resins offer exceptional impact resistance, heat distortion resistance, and optical clarity. The CALIBRE 300-10 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:
Appliances
Storage media housings
Business equipment
Electrical components
Lighting
Transportation
Houseware
Recreation
Packaging applications

General Information			
UL YellowCard	E54680-469960	E157291-238223	E206114-228275
Additive	Mold Release		
Features	High Clarity		
	High Impact Resistance		
Uses	Appliances		
	Business Equipment		
	Electrical/Electronic Applications		
	Household Goods		
	Housings		
	Lighting Applications		
	Packaging		
Agency Ratings	CSA Unspecified Rating		
Forms	Pellets		
Processing Method	Film Extrusion		
	Injection Molding		
	Sheet Extrusion		
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)	10	g/10 min	ISO 1133
Melt volume-flow rate (300°C/1.2 kg)	9.00	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	13	kJ/m ²	
23°C	35	kJ/m ²	
Notched Izod Impact Strength (23°C)	90	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Annealed	144	°C	ISO 75-2/B
1.8 MPa, Unannealed	125	°C	ISO 75-2/A
1.8 MPa, Annealed	141	°C	ISO 75-2/A
Vicat Softening Temperature	149	°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.		
5.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		
6.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		
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