

CALIBRE™ 302V-10

Polycarbonate Resin

Trinseo

Message:

CALIBRE™ 300V-10 Series polycarbonate resins offer exceptional impact resistance, heat distortion resistance, optical clarity and meet UL94 V-2 rating. The CALIBRE 300V series products are available in 3 additive packages: CALIBRE 301V: Mold release. CALIBRE 302V: UV stabilizer. CALIBRE 303V: Mould release and UV stabilizer.

Govt and Industry Standards:

CSA (Canadian Standards Association)

UL (Underwriters Laboratory, Inc.)

Applications:

Electronic components

Lighting

Storage media housings

General Information			
UL YellowCard	E54680-469965	E54680-469966	E206114-228278
Additive	UV Stabilizer		
Features	High Clarity		
	High Impact Resistance		
Uses	Electrical/Electronic Applications		
	Housings		
	Lighting Applications		
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
--	1200	kg/m ³	ISO 1183 ¹
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)	8.00	cm ³ /10min	ISO 1133 ²
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2300	MPa	ISO 527-2/50, ISO 527-2 ³
Tensile Stress			
Yield	60.0	MPa	ISO 527-2/50, ISO 527-2 ⁴

Break	71.0	MPa	ISO 527-2/50
Tensile Strain			
Yield	6.0	%	ISO 527-2/50, ISO 527-2 ⁵
Break	150	%	ISO 527-2/50
Nominal strain at break	> 50	%	ISO 527-2 ⁶
Flexural Modulus ⁷	2400	MPa	ISO 178
Flexural Stress ⁸	97.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			
23°C	35	kJ/m ²	ISO 179/1eA
-30°C	13.0	kJ/m ²	ISO 179/1eA ⁹
23°C	90.0	kJ/m ²	ISO 179/1eA ¹⁰
Charpy impact strength			ISO 179/1eU ¹¹
-30°C	No Break		
23°C	No Break		
Notched Izod Impact (23°C)	900	J/m	ISO 180/4A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Annealed	141	°C	ISO 75-2/B
0.45 MPa	145	°C	ISO 75-2 ¹²
1.8 MPa, Unannealed	122	°C	ISO 75-2/A
1.8 MPa, Annealed	138	°C	ISO 75-2/A
1.8 MPa	131	°C	ISO 75-2 ¹³
Vicat Softening Temperature			
--	146	°C	ISO 306/B50
50°C/h, B (50N)	149	°C	ISO 306 ¹⁴
Ball Indentation Temperature	125	°C	IEC 60335-1
CLTE - Flow	7.0E-5	cm/cm/°C	ISO 11359-2 ¹⁵
Electrical	Nominal Value	Unit	Test Method
Volume resistivity	> 1.0E+13	ohms·m	IEC 60093 ¹⁶
Electric strength	17	kV/mm	IEC 60243-1 ¹⁷
Relative Permittivity			IEC 60250 ¹⁸
100 Hz	3.00		
1 MHz	3.00		
Dissipation Factor			IEC 60250 ¹⁹
100 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 ²⁰			UL 94
1.60 mm	V-2		

3.20 mm	V-2		
Burning Behav. at 1.6mm nom. thickn. (1.60 mm, UL)	V-2		ISO 1210 ²¹
Burning Behav. at thickness h (3.20 mm, UL)	V-2		ISO 1210 ²²
Oxygen index	26	%	ISO 4589-2 ²³

NOTE

1.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
2.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
3.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
4.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
5.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
6.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
7.	2.0 mm/min
8.	2.0 mm/min
9.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
10.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
11.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
12.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
13.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
14.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
15.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
16.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

17.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
18.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
19.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
20.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
21.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
22.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.
23.	Tested in accordance with ISO 10350. 23°C/50%r.h. unless otherwise noted.

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