TRINSEO™

CALIBRE™ 301V-6
Polycarbonate Resin

Overview

CALIBRE™ 301V-6 Polycarbonate resin offers exceptional impact resistance and heat distortion resistance, and meets UL94 V-2 rating. CALIBRE 301V-6 contains a mold release agent and is available in opaque colors.

Govt. and Industry Standards:

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

Applications:

- Electronic components
- Automotive
- Lighting
- Storage Media Housings

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.20	g/cm³	1.20	g/cm³	ASTM D792 ISO 1183/A
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	6.0	g/10 min	6.0	g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	0.50 to 0.70	%	ASTM D955 ISO 294-4
Water Absorption					
24 hr, 73°F (23°C)	0.15	%	0.15	%	ASTM D570
73°F (23°C), 24 hr	0.15	%	0.15	%	ISO 62
Equilibrium, 73°F (23°C), 50% RH	0.32	%	0.32	%	ASTM D570 ISO 62
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus					
-- [1]	350000	psi	2410	MPa	ASTM D638
--	350000	psi	2410	MPa	ISO 527-2/50
Tensile Strength					
Yield [1]	8700	psi	60.0	MPa	ASTM D638
Yield	8700	psi	60.0	MPa	ISO 527-2/50
Break [1]	10500	psi	72.4	MPa	ASTM D638
Break	10400	psi	72.0	MPa	ISO 527-2/50
Tensile Elongation					
Yield [1]	6.0	%	6.0	%	ASTM D638
Yield	6.0	%	6.0	%	ISO 527-2/50
Break [1]	150	%	150	%	ASTM D638
Break	150	%	150	%	ISO 527-2/50
Flexural Modulus					
-- [2]	350000	psi	2410	MPa	ASTM D790
-- [3, 4]	350000	psi	2410	MPa	ISO 178
Flexural Strength					
-- [2]	14000	psi	96.5	MPa	ASTM D790
-- [3, 4]	13900	psi	96.0	MPa	ISO 178
Taber Abrasion Resistance	45	%	45	%	ASTM D1044

Impact	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Notched Izod Impact					
73°F (23°C)	17	ft·lb/in	910	J/m	ASTM D256
73°F (23°C)	42	ft·lb/in²	88	kJ/m²	ISO 180/A
Unnotched Izod Impact (73°F (23°C))	No Break		No Break		ASTM D256 ISO 180
Instrumented Dart Impact [5]					ASTM D3763
73°F (23°C), Total Energy	800	in·lb	90.4	J	
Tensile Impact Strength	280	ft·lb/in²	588	kJ/m²	ASTM D1822
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Rockwell Hardness					ASTM D785
M-Scale	73		73		
R-Scale	118		118		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					
66 psi (0.45 MPa), Annealed	288	°F	142	°C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Unannealed	252	°F	122	°C	ASTM D648 ISO 75-2/A
264 psi (1.8 MPa), Annealed	282	°F	139	°C	ASTM D648 ISO 75-2/A
Vicat Softening Temperature	298	°F	148	°C	ISO 306/B50 ASTM D1525 [6]
CLTE - Flow (-40 to 180°F (-40 to 82°C))	3.8E-5	in/in/°F	6.8E-5	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Volume Resistivity	2.0E+17	ohms·cm	2.0E+17	ohms·cm	ASTM D257
Dielectric Strength					
--	420	V/mil	17	kV/mm	ASTM D149
--	430	V/mil	17	kV/mm	IEC 60243-1
Dielectric Constant					ASTM D150
60 Hz	3.00		3.00		
1 MHz	3.00		3.00		
Dissipation Factor					ASTM D150
50 Hz	1.0E-3		1.0E-3		
1 MHz	2.0E-3		2.0E-3		
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [7]					UL 94
0.06 in (1.6 mm)	V-2		V-2		
0.13 in (3.2 mm)	V-2		V-2		
Oxygen Index [7]	26	%	26	%	ISO 4589-2
Average Extent of Burning	1	in	3	cm	ASTM D635

Additional Information

ASTM and ISO test methods may not be technically equivalent, so that data values may differ from those obtained by simple unit conversion.