

CALIBRE™ 302V-6 LD

Polycarbonate Resin

Trinseo

Message:

CALIBRE™ 302V-6 LD HC18010009 Polycarbonate is an opalescent white extrusion-grade resin containing a proprietary light diffusion package that offers an excellent combination of light transmission, light diffusion and whiteness for electronic signage and lighting applications and has been specifically designed to be used with LED light sources. CALIBRE™ 302V-6 LD HC18010009 is UV stabilized, has outstanding impact resistance, heat distortion resistance, and meets UL94 V-2 rating.

Applications:

LED back-lit sign faces and channel letters

Complies with:

CSA (Canadian Standards Association)

UL (Underwriters Laboratory, Inc.)

General Information			
UL YellowCard	E54680-100314447		
Additive	UV stabilizer		
Features	High Light Transmission		
	Impact resistance, high		
Uses	LEDs		
	Lighting Applications		
	Electrical/Electronic Applications		
Agency Ratings	CSA not rated		
Forms	Particle		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792, ISO 1183/A
Melt Mass-Flow Rate (MFR)			
300°C/1.2 kg	6.0	g/10 min	ASTM D1238
300°C/1.2 kg	5.6	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.50 - 0.70	%	ASTM D955
Water Absorption			ASTM D570, ISO 62
23°C, 24 hr	0.15	%	ASTM D570, ISO 62
Equilibrium, 23°C, 50% RH	0.32	%	ASTM D570, ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	2310	MPa	ASTM D638
--	2310	MPa	ISO 527-2/50
Tensile Strength			
Yield ²	60.0	MPa	ASTM D638
Yield	60.0	MPa	ISO 527-2/50
Fracture ³	72.4	MPa	ASTM D638

Fracture	72.0	MPa	ISO 527-2/50
Tensile Elongation ⁴			ASTM D638
Yield	6.0	%	ASTM D638
Fracture	130	%	ASTM D638
Flexural Modulus			
-- ⁵	2310	MPa	ASTM D790
--	2310	MPa	ISO 178
Flexural Strength			
-- ⁶	91.7	MPa	ASTM D790
--	91.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	960	J/m	ASTM D256
23°C	94	kJ/m ²	ISO 180/A
Unnotched Izod Impact (23°C)	No Break		ASTM D256, ISO 180
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, not annealed	126	°C	ASTM D648
1.8 MPa, annealed	139	°C	ASTM D648
CLTE - Flow	6.8E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	2.0E+17	ohms·cm	ASTM D257
Dielectric Strength	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.00		ASTM D150
1 MHz	3.00		ASTM D150
Dissipation Factor			ASTM D150
50 Hz	1.0E-3		ASTM D150
1 MHz	2.0E-3		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁷			UL 94
1.60 mm	V-2		UL 94
3.20 mm	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Transmittance ⁸			ASTM D1003
3200 μm	35.0	%	ASTM D1003
4500 μm	25.0	%	ASTM D1003
Additional Information			
ASTM 和 ISO 测试方法在技术上可能不相同,所以数据值可能不同于简单单位换算获得的值.			
NOTE			
1.	50 mm/min		
2.	50 mm/min		

3.	50 mm/min
4.	50 mm/min
5.	Method I (three-point load), 2.0 mm/min
6.	Method I (three-point load), 2.0 mm/min
7.	This rating is not intended to reflect the danger caused by this or any other material under actual fire conditions.
8.	The light transmission value determined for coextruded sheets of 3.2mm(0.125 inches) and 4.5mm(0.177 inches) thickness includes a 0.125mm(0.005 inch) thickness UV protective cap layer of XZ 94219.04 polycarbonate resin.

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