TRINSEO™

CALIBRE™ 3503
Polycarbonate Resin

Overview

CALIBRE™ 3503 is a polycarbonate resin offering an excellent balance of impact resistance, heat distortion resistance and optical clarity with outstanding process ability for injection molding applications. CALIBRE 3503 contains mould release and UV stabilizer.

Govt. and Industry Standards:

- Underwriters Laboratory Inc. (UL)

Applications:

- Lighting
- Electrical
- Storage

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.20	g/cm³	1.20	g/cm³	ASTM D792 ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	35	g/10 min	35	g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	5.0E-3	in/in	0.50	%	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]	334000	psi	2300	MPa	ASTM D638
--	334000	psi	2300	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]	10300	psi	71.0	MPa	ASTM D638
Break	10300	psi	71.0	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]	110	%	110	%	ASTM D638
Break	110	%	110	%	ISO 527-2/50
Flexural Modulus					
-- [2]	348000	psi	2400	MPa	ASTM D790
-- [3]	348000	psi	2400	MPa	ISO 178
Flexural Strength					
-- [2]	14100	psi	97.0	MPa	ASTM D790
-- [3]	14100	psi	97.0	MPa	ISO 178
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Charpy Notched Impact Strength (73°F (23°C))	7.1	ft·lb/in²	15	kJ/m²	ISO 179/1eA

Impact	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Notched Izod Impact					
73°F (23°C)	33	ft·lb/in	1800	J/m	ASTM D256
73°F (23°C)	33	ft·lb/in²	69	kJ/m²	ISO 180/A
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					
66 psi (0.45 MPa), Annealed	286	°F	141	°C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Annealed	284	°F	140	°C	ASTM D648
264 psi (1.8 MPa), Annealed	280	°F	138	°C	ISO 75-2/A
Vicat Softening Temperature	293	°F	145	°C	ISO 306/B50 ASTM D1525 [4]
Ball Indentation Temperature	> 257	°F	> 125	°C	IEC 60335-1
CLTE - Flow	3.9E-5	in/in/°F	7.0E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Volume Resistivity	> 1.0E+15	ohms·cm	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength	430	V/mil	17	kV/mm	ASTM D149 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		
Comparative Tracking Index					IEC 60112
0.0787 in (2.00 mm), Solution A	250	V	250	V	
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [5]					UL 94
0.04 in (1.0 mm)	V-2		V-2		
0.06 in (1.5 mm)	V-2		V-2		
0.12 in (3.0 mm)	V-2		V-2		
Glow Wire Flammability Index [5]					IEC 60695-2-12
0.04 in (1.0 mm)	1650	°F	900	°C	
0.08 in (2.0 mm)	1610	°F	875	°C	
0.12 in (3.0 mm)	1610	°F	875	°C	
Glow Wire Ignition Temperature [5]					IEC 60695-2-13
0.04 in (1.0 mm)	1470	°F	800	°C	
0.08 in (2.0 mm)	1430	°F	775	°C	
0.12 in (3.0 mm)	1430	°F	775	°C	
Oxygen Index [5]	26	%	26	%	ISO 4589-2
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Refractive Index	1.586		1.586		ASTM D542 ISO 489
Transmittance	89.0	%	89.0	%	ASTM D1003
Haze	1.0	%	1.0	%	ASTM D1003