TRINSEO™

CALIBRE™ 502-3
Polycarbonate Resin

Overview

CALIBRE™ 502-3 TC0302156 Resin is specially designed to provide increased fatigue resistance for extruded solid sheets. The resin is UV bulk stabilized, but outdoor use requires a co-extruded UV cap layer. It is recommended to apply in that case a 40 to 50 micron co-extruded layer of CALIBRE™ 320UV. CALIBRE 502-3 TC0302156 is also suitable to extrude corrugated solid sheet thanks to its low melt sagging.

Main Characteristics

- Fatigue resistance
- Low melt sagging

Applications

- Flat solid polycarbonate sheet
- Corrugated solid sheet

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)	3.0	g/10 min	3.0	g/10 min	ASTM D1238 ISO 1133
Mechanical	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Tensile Modulus					ASTM D638 ISO 527-2
0.157 in (4.00 mm), Injection Molded	319000	psi	2200	MPa	
Tensile Strength					ASTM D638 ISO 527-2
Yield, 0.157 in (4.00 mm), Injection Molded	8850	psi	61.0	MPa	
Break, 0.157 in (4.00 mm), Injection Molded	9860	psi	68.0	MPa	
Tensile Elongation					ASTM D638 ISO 527-2
Yield, 0.157 in (4.00 mm), Injection Molded	6.0	%	6.0	%	
Break, 0.157 in (4.00 mm), Injection Molded	100	%	100	%	
Flexural Modulus					ASTM D790 ISO 178
0.157 in (4.00 mm), Injection Molded	334000	psi	2300	MPa	
Flexural Strength					ASTM D790 ISO 178
0.157 in (4.00 mm), Injection Molded	13100	psi	90.3	MPa	
Impact	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Charpy Notched Impact Strength					ISO 179/1eA
73°F (23°C), Injection Molded	34	ft·lb/in²	72	kJ/m²	
Notched Izod Impact					ASTM D256
73°F (23°C), 0.157 in (4.00 mm), Injection Molded	16	ft·lb/in	850	J/m	
Thermal	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Deflection Temperature Under Load					
66 psi (0.45 MPa), Annealed	293	°F	145	°C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Unannealed	270	°F	132	°C	ASTM D648 ISO 75-2/A
Vicat Softening Temperature	316	°F	158	°C	ISO 306/B50 ASTM D1525 [1]
Flammability	**Nominal Value (English)**		**Nominal Value (SI)**		**Test Method**
Flame Rating [2] (0.06 in (1.6 mm))	HB		HB		UL 94