

Technical Information



TRINSEO CELEX™ 310HF.M

Polycarbonate Resin

Overview

Trinseo CELEX™ 310HF.M glass fiber reinforced polycarbonate resin is a 10% glass fiber reinforced polycarbonate material. It provides a property balance of easy flow, superior ignition resistance, high rigidity, dimension stability and heat resistance. It provides the injection molded part with good aesthetics. It does not contain Chlorine/or Bromine and phosphate type flame retardants. It is designed for a wide range of applications, e.g. computer enclosures, electronic accessories and electrical appliances.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.28 g/cm ³	1.28 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	18 g/10 min	18 g/10 min	ASTM D1238
Molding Shrinkage - Flow	2.0E-3 to 4.0E-3 in/in	0.20 to 0.40 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus ¹	551000 psi	3800 MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	10200 psi	70.0 MPa	
Break	11600 psi	80.0 MPa	
Tensile Elongation ² (Break)	3.0 %	3.0 %	ASTM D638
Flexural Modulus	609000 psi	4200 MPa	ASTM D790
Flexural Strength	16000 psi	110 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	1.5 ft-lb/in	80 J/m	ASTM D256
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	239 °F	115 °C	
Vicat Softening Temperature	270 °F	132 °C	ASTM D1525 ³
RTI Elec	176 °F	80.0 °C	UL 746B
RTI Imp	176 °F	80.0 °C	UL 746B
RTI Str	176 °F	80.0 °C	UL 746B
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	1.0E+11 ohms-cm	1.0E+11 ohms-cm	ASTM D257 IEC 60093
Dielectric Strength	940 V/mil	37 kV/mm	ASTM D149
Comparative Tracking Index (CTI)	PLC 3	PLC 3	UL 746A
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁴			UL 94
0.020 in (0.50 mm), All Colors	V-2	V-2	
0.06 in (1.6 mm), All colors	V-0	V-0	
0.10 in (2.5 mm), All colors	5VB	5VB	
Glow Wire Flammability Index ⁴			IEC 60695-2-12
0.04 in (1.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature ⁴			IEC 60695-2-13
0.04 in (1.0 mm)	1470 °F	800 °C	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	518 to 590 °F	270 to 310 °C
Mold Temperature	140 to 212 °F	60 to 100 °C

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ 0.039 in/min (1.0 mm/min)

² 0.20 in/min (5.0 mm/min)

³ Rate B (120°C/h), Loading 1 (10 N)

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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