

CELEX™ 310HF.M Polycarbonate Resin

Overview

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 Strength			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	10200 psi	70.0 MPa	
Tensile Elongation			ASTM D638
Break, 0.126 in (3.20 mm), Injection Molded	3.0 %	3.0 %	
Flexural Modulus			ASTM D790
0.126 in (3.20 mm), Injection Molded	580000 psi	4000 MPa	
Flexural Strength			ASTM D790
0.126 in (3.20 mm), Injection Molded	16000 psi	110 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	1.5 ft·lb/in	80 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ASTM D785
R-Scale, 0.126 in (3.20 mm), Injection Molded	124	124	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	245 °F	118 °C	
264 psi (1.8 MPa), Unannealed	234 °F	112 °C	
Vicat Softening Temperature	270 °F	132 °C	ASTM D1525 ¹
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ²			UL 94
0.04 in (1.0 mm), WT and RD	V-1	V-1	
0.04 in (1.0 mm), BK and NC	V-0	V-0	
0.06 in (1.6 mm)	V-0	V-0	
0.08 in (2.0 mm)	5VB	5VB	
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	250 °F	121 °C	
Drying Time	4.0 hr	4.0 hr	
Processing (Melt) Temp	520 to 590 °F	271 to 310 °C	
Mold Temperature	140 to 212 °F	60 to 100 °C	