

EMERGE™ PC 8731 Advanced Resin

Overview

EMERGE PC 8731 Advanced Resin is an ignition-resistant, 10% glass reinforced, and UV resistant polycarbonate resin. EMERGE PC 8731 is rated as f1 resin by Underwriters Laboratory. This resin contains no bromine, chlorine, or phosphate additives. It is a medium flow PC resin with a mold release system, intended for injection molding applications.

Applications

- Information technology equipment
- Electrical parts
- Other structural/internal parts

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)	13 g/10 min	13 g/10 min	ASTM D1238
Molding Shrinkage - Flow	4.0E-3 to 6.0E-3 in/in	0.40 to 0.60 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			ASTM D638
0.126 in (3.20 mm), Injection Molded	580000 psi	4000 MPa	
Tensile Strength			ASTM D638
Break, 0.126 in (3.20 mm), Injection Molded	8700 psi	60.0 MPa	
Tensile Elongation			ASTM D638
Break, 0.126 in (3.20 mm), Injection Molded	4.0 %	4.0 %	
Flexural Modulus			ASTM D790
0.126 in (3.20 mm), Injection Molded	479000 psi	3300 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	2.1 ft-lb/in	110 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	286 °F	141 °C	
264 psi (1.8 MPa), Unannealed	271 °F	133 °C	
264 psi (1.8 MPa), Annealed	282 °F	139 °C	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ¹			UL 94
0.06 in (1.5 mm)	V-0	V-0	
0.12 in (3.0 mm)	5VA	5VA	
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	554 to 599 °F	290 to 315 °C	
Mold Temperature	176 to 239 °F	80 to 115 °C	