

EMERGE™ PC 8702-10 Advanced Resin

Overview

EMERGE™ PC 8702 Advanced Resin is an ignition-resistant, 20% glass reinforced, polycarbonate resin. This resin contains no bromine, chlorine, or phosphate additives. The resin is designed to meet the German norm DIN VDE-0472/Part 815 (1989) on halogens. 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	1.33 g/cm ³	1.33 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10 g/10 min	10 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			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	14500 psi	100 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	780000 psi	5380 MPa	
Flexural Strength			ASTM D790
0.126 in (3.20 mm), Injection Molded	17400 psi	120 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	293 °F	145 °C	
264 psi (1.8 MPa), Unannealed	284 °F	140 °C	
264 psi (1.8 MPa), Annealed	289 °F	143 °C	
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	3.0E+14 ohms	3.0E+14 ohms	ASTM D257
Volume Resistivity (0.0709 in (1.80 mm))	1.0E+16 ohms·cm	1.0E+16 ohms·cm	ASTM D257
Dielectric Strength (0.0630 in (1.60 mm))	690 V/mil	27 kV/mm	ASTM D149
Dielectric Constant			ASTM D150
0.0630 in (1.60 mm), 1 MHz	3.10	3.10	
Comparative Tracking Index			IEC 60112
0.118 in (3.00 mm)	175 V	175 V	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ¹ (0.06 in (1.5 mm))	V-0	V-0	UL 94
Injection	Nominal Value (English)	Nominal Value (SI)	Test Method
Drying Temperature	250 °F	121 °C	
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr	

Injection	Nominal Value (English)	Nominal Value (SI)
Processing (Melt) Temp	550 to 600 °F	288 to 316 °C
Mold Temperature	175 to 240 °F	79 to 116 °C