

EMERGE™ PC 8600-7 Advanced Resin

Overview

EMERGE™ PC 8600 is a translucent ignition-resistant polycarbonate resin. This resin contains no bromine, chlorine or phosphate additives and is intended to comply with global environmental standards. It is an easy flow PC resin suitable for use in injection molded applications.

Applications:

- Information Technology Equipment
- Power adaptors

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	7.0 g/10 min	7.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			ASTM D638
0.126 in (3.20 mm), Injection Molded	320000 psi	2210 MPa	
Tensile Strength			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	8700 psi	60.0 MPa	
Break, 0.126 in (3.20 mm), Injection Molded	8400 psi	57.9 MPa	
Tensile Elongation			ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	6.2 %	6.2 %	
Break, 0.126 in (3.20 mm), Injection Molded	110 %	110 %	
Flexural Modulus			ASTM D790
0.126 in (3.20 mm), Injection Molded	348000 psi	2400 MPa	
Flexural Strength			ASTM D790
0.126 in (3.20 mm), Injection Molded	13600 psi	93.8 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	14 ft-lb/in	750 J/m	
Instrumented Dart Impact ¹			ASTM D3763
73°F (23°C), 0.126 in (3.20 mm), Injection Molded, Total Energy	520 in-lb	58.8 J	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ASTM D785
R-Scale, 0.126 in (3.20 mm), Injection Molded	123	123	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed	282 °F	139 °C	
264 psi (1.8 MPa), Unannealed	260 °F	127 °C	
Vicat Softening Temperature	300 °F	149 °C	ASTM D1525 ²
CLTE - Flow (-40 to 180°F (-40 to 82°C))	3.6E-5 in/in/°F	6.5E-5 cm/cm/°C	ASTM D696
RTI Elec (0.13 in (3.2 mm))	257 °F	125 °C	UL 746
RTI Imp (0.13 in (3.2 mm))	257 °F	125 °C	UL 746
RTI Str (0.13 in (3.2 mm))	257 °F	125 °C	UL 746

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ³			UL 94
0.06 in (1.5 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
Glow Wire Flammability Index ³			IEC 60695-2-12
0.04 in (1.0 mm)	1760 °F	960 °C	
Oxygen Index ³	35 %	35 %	ASTM D2863

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	250 °F	121 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	520 to 550 °F	271 to 288 °C
Mold Temperature	150 to 210 °F	66 to 99 °C

Notes

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

¹ 11.1 ft/sec (3.39 m/sec)

² Rate B (120°C/h), Loading 1 (10 N)

³ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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