

EMERGE™ PC 8600-20

Advanced Resin

Overview

EMERGE™ PC 8600 is a translucent, ignition-resistant and easy flow polycarbonate resin. This resin contains no bromine, chlorine or phosphate additives and is intended to comply with global environmental standards. It has a UL94 flammability rating of V-0 at 1.5mm.

Applications:

- A broad range of injection molded applications in the electronics, electrical and information technology equipment markets.

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	20 g/10 min	20 g/10 min	ISO 1133
Molding Shrinkage	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Stress			ISO 527-2/50
Yield, 0.157 in (4.00 mm), Injection Molded	8700 psi	60.0 MPa	
Break, 0.157 in (4.00 mm), Injection Molded	8410 psi	58.0 MPa	
Tensile Strain			ISO 527-2/50
Yield, 0.157 in (4.00 mm), Injection Molded	6.0 %	6.0 %	
Break, 0.157 in (4.00 mm), Injection Molded	100 %	100 %	
Flexural Modulus ¹			ISO 178
0.157 in (4.00 mm), Injection Molded	348000 psi	2400 MPa	
Flexural Stress ¹			ISO 178
0.157 in (4.00 mm), Injection Molded	13600 psi	94.0 MPa	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
73°F (23°C), Injection Molded	13 ft-lb/in	690 J/m	
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ISO 2039-2
R-Scale, 0.157 in (4.00 mm)	123	123	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Unannealed	277 °F	136 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	252 °F	122 °C	ISO 75-2/A
Vicat Softening Temperature			
--	302 °F	150 °C	ISO 306/A120
--	289 °F	143 °C	ISO 306/B50
Ball Indentation Temperature	> 257 °F	> 125 °C	IEC 60335-1
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	257 °F	125 °C	UL 746
RTI Imp	257 °F	125 °C	UL 746
RTI Str	257 °F	125 °C	UL 746
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ² (0.06 in (1.5 mm))	V-0	V-0	UL 94
Glow Wire Ignition Temperature ²			IEC 60695-2-13
0.04 in (1.0 mm)	1760 °F	960 °C	
Oxygen Index ²	35 %	35 %	ISO 4589-2

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	257 °F	125 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	500 to 536 °F	260 to 280 °C
Mold Temperature	158 to 212 °F	70 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 0.079 in/min (2.0 mm/min)

² This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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