

EMERGE™ PC 8330 Advanced Resin

Overview

EMERGE™ PC 8330 advanced resin is a transparent, ultraviolet light resistant and ignition resistant PC resin that contains no chlorinated or brominated nor phosphorous-based additives. It combines mechanical performance and high heat resistance with excellent processing characteristics. It is a transparent material with UL-94 V-0 rating at 2.5 mm.

Applications:
LCD TV Housings
Lighting

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22 g/10 min	22 g/10 min	ISO 1133
Molding Shrinkage - Flow	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 Modulus			ISO 527-2/1
0.157 in (4.00 mm), Injection Molded	348000 psi	2400 MPa	
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 %	
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
73°F (23°C), Injection Molded	5.7 ft-lb/in ²	12 kJ/m ²	
Notched Izod Impact			
0.126 in (3.20 mm), Injection Molded ¹	14 ft-lb/in	750 J/m	ISO 180
73°F (23°C), Injection Molded	5.2 ft-lb/in ²	11 kJ/m ²	ISO 180/A
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Vicat Softening Temperature	300 °F	149 °C	ISO 306/A120
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ² (0.10 in (2.5 mm))	V-0	V-0	UL 94
Glow Wire Flammability Index ²			IEC 60695-2-12
0.04 in (1.0 mm)	1760 °F	960 °C	
0.08 in (2.0 mm)	1760 °F	960 °C	
0.12 in (3.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature ²			IEC 60695-2-13
0.04 in (1.0 mm)	1560 °F	850 °C	
0.08 in (2.0 mm)	1560 °F	850 °C	
0.12 in (3.0 mm)	1560 °F	850 °C	
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Transmittance	87.0 to 91.0 %	87.0 to 91.0 %	ASTM D1003

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	500 to 572 °F	260 to 300 °C
Mold Temperature	158 to 212 °F	70 to 100 °C