

EMERGE™ PC 8230-10

Advanced Resin

Overview

EMERGE™ PC 8230-10 is translucent, ultraviolet light resistance and ignition resistant polycarbonate resin. This resin contains no bromine, chlorine, or phosphate flame retardants and is intended to comply with global environmental standards. It combines mechanical performance and high heat resistance with excellent processing characteristics in injection molded applications.

Applications:

- Information technology equipment
- Electronics and electrical appliances

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)	10 g/10 min	10 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 Modulus	348000 psi	2400 MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	8700 psi	60.0 MPa	
Break	8410 psi	58.0 MPa	
Tensile Strain (Break)	110 %	110 %	ISO 527-2/50
Flexural Modulus	338000 psi	2330 MPa	ISO 178
Flexural Stress	13800 psi	95.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	17 ft-lb/in ²	35 kJ/m ²	ISO 179/1eA
Notched Izod Impact Strength (73°F (23°C))	33 ft-lb/in ²	70 kJ/m ²	ISO 180/A
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	73	73	
R-Scale	118	118	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Annealed	284 °F	140 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	253 °F	123 °C	ISO 75-2/A
264 psi (1.8 MPa), Annealed	279 °F	137 °C	ISO 75-2/A
Vicat Softening Temperature	289 °F	143 °C	ISO 306/B50
Ball Indentation Temperature	> 257 °F	> 125 °C	IEC 60335-1
CLTE - Flow	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	ISO 11359-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Surface Resistivity	> 1.0E+15 ohms	> 1.0E+15 ohms	IEC 60093
Volume Resistivity	> 1.0E+15 ohms-cm	> 1.0E+15 ohms-cm	IEC 60093
Electric Strength	430 V/mil	17 kV/mm	IEC 60243-1
Dielectric Constant			IEC 60250
1 Hz	2.70	2.70	
50 Hz	2.70	2.70	
Dissipation Factor			IEC 60250
1 Hz	1.0E-3	1.0E-3	
50 Hz	1.0E-3	1.0E-3	
Comparative Tracking Index (Solution A)	225 V	225 V	IEC 60112

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)	• V-0 • 5VA	• V-0 • 5VA	
Glow Wire Flammability Index ¹			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 ¹			IEC 60695-2-13
0.04 in (1.0 mm)	1470 °F	800 °C	
0.08 in (2.0 mm)	1470 °F	800 °C	
0.12 in (3.0 mm)	1470 °F	800 °C	
Oxygen Index ¹	40 %	40 %	ISO 4589-2
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	518 to 590 °F	270 to 310 °C	
Mold Temperature	140 to 212 °F	60 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 This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.



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