

## EMERGE™ PC 8230-8 Advanced Resin

### Overview

EMERGE™ PC 8230-8 is translucent, ultraviolet light resistance and ignition resistant polycarbonate resin. This resin contains no chlorinated, brominated or phosphate flame retardant additives 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. This resin contains mould release and it is UV stabilized.

Applications:

- Information technology equipment
- Electronics and electrical appliances

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm <sup>3</sup>	1.20 g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	8.0 g/10 min	8.0 g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955 ISO 294-4
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus <sup>1</sup>	334000 psi	2300 MPa	ASTM D638
Tensile Strength <sup>2</sup>			ASTM D638
Yield	8700 psi	60.0 MPa	
Break	9430 psi	65.0 MPa	
Tensile Elongation <sup>2</sup>			ASTM D638
Yield	6.0 %	6.0 %	
Break	120 %	120 %	
Flexural Modulus <sup>3</sup>	348000 psi	2400 MPa	ASTM D790
Flexural Strength <sup>3</sup>	13100 psi	90.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			ASTM D256
-40°F (-40°C)	11 ft-lb/in	600 J/m	
-22°F (-30°C)	12 ft-lb/in	650 J/m	
73°F (23°C)	14 ft-lb/in	750 J/m	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	257 °F	125 °C	
Vicat Softening Temperature	293 °F	145 °C	ASTM D1525 <sup>4</sup>
Ball Indentation Temperature	> 257 °F	> 125 °C	IEC 60335-1
CLTE - Flow (-40 to 176°F (-40 to 80°C))	3.6E-5 in/in/°F	6.5E-5 cm/cm/°C	ASTM D696
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Arc Resistance	PLC 7	PLC 7	ASTM D495

<b>Flammability</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	<b>Test Method</b>
Flame Rating <sup>5</sup>			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 <sup>5</sup>			IEC 60695-2-12
0.08 in (2.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature <sup>5</sup>			IEC 60695-2-13
0.08 in (2.0 mm)	1470 °F	800 °C	
Oxygen Index	37 %	37 %	ISO 4589-2
<b>Injection</b>	<b>Nominal Value (English)</b>	<b>Nominal Value (SI)</b>	
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 572 °F	270 to 300 °C	
Mold Temperature	158 to 230 °F	70 to 110 °C	