

Technical Information



EMERGE™ PC 8160-10 Advanced Resin

Overview

EMERGE™ PC 8160-10 advanced resin is an opaque, ignition resistant PC resin that contains no chlorinated or brominated or phosphate flame retardant additives and provides superior ignition resistance and ultraviolet light resistance. This resin combines good mechanical and high heat properties and maintains excellent processability and contains mold release agent.

Applications:

- Meters
- Electrical applications
- Tube and bulb of LED lighting applications

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)	10 g/10 min	10 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 ¹	334000 psi	2300 MPa	ASTM D638
Tensile Strength ²			ASTM D638
Yield	8700 psi	60.0 MPa	
Break	9430 psi	65.0 MPa	
Tensile Elongation ²			ASTM D638
Yield	6.0 %	6.0 %	
Break	120 %	120 %	
Flexural Modulus ³	348000 psi	2400 MPa	ASTM D790
Flexural Strength ³	13800 psi	95.0 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	13 ft-lb/in	700 J/m	ASTM D256
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load 264 psi (1.8 MPa), Unannealed	257 °F	125 °C	ASTM D648
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
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁴			UL 94
0.04 in (1.0 mm)	V-0	V-0	
0.08 in (2.0 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
Glow Wire Flammability Index ⁴			IEC 60695-2-12
0.08 in (2.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature ⁴			IEC 60695-2-13
0.08 in (2.0 mm)	1560 °F	850 °C	

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 572 °F	270 to 300 °C
Mold Temperature	158 to 230 °F	70 to 110 °C

Notes

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

¹ 0.039 in/min (1.0 mm/min)

² 2.0 in/min (50 mm/min)

³ 0.051 in/min (1.3 mm/min)

⁴ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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