

Technical Information



EMERGE™ PC 4310-10 Advanced Resin

Overview

EMERGE™ PC 4310-10 Advanced Resin is a high-performance polycarbonate resin offering high heat resistance and maximum toughness. This resin is available in a full range of colors that can be custom tailored to meet your product requirements.

Applications:

- Consumer electronics and information technology equipment
- Computer and business equipment
- Portable electronics

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
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	14000 psi	96.5 MPa	ASTM D790
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact (73°F (23°C))	15 ft-lb/in	800 J/m	ASTM D256
Instrumented Dart Impact ⁴			ASTM D3763
73°F (23°C), Total Energy	770 in-lb	87.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	261 °F	127 °C	
Vicat Softening Temperature	300 °F	149 °C	ASTM D1525 ⁵
CLTE - Flow (-40 to 176°F (-40 to 80°C))	3.8E-5 in/in/°F	6.8E-5 cm/cm/°C	ASTM D696
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Arc Resistance	PLC 5	PLC 5	ASTM D495
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁶			UL 94
0.06 in (1.6 mm)	HB	HB	
0.13 in (3.2 mm)	HB	HB	
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 11.1 ft/sec (3.39 m/sec)

⁵ Rate A (50°C/h), Loading 2 (50 N)

⁶ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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