

EMERGE™ PC 8130-10 Advanced Resin

Overview

EMERGE™ PC 8130 Advanced Resin is an ignition-resistant polycarbonate resin with improved UV stability. It is designed for thin-wall applications and has a UL94 V-0 rating at 1.0 mm. EMERGE PC 8130 is also f1 rated according to UL 746C. This resin does not contain chlorinated or brominated flame retardant additives.

Applications:

- Powered Device Housings
- Information technology equipment
- Electrical parts

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			
Yield ²	8700 psi	60.0 MPa	ASTM D638
Yield	8850 psi	61.0 MPa	ISO 527-2/50
Break ²	9430 psi	65.0 MPa	ASTM D638
Break	8560 psi	59.0 MPa	ISO 527-2/50
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
Instrumented Dart Impact ⁴			ASTM D3763
73°F (23°C), Total energy	549 in·lb	62.0 J	
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	259 °F	126 °C	
Vicat Softening Temperature	304 °F	151 °C	ASTM D1525 ⁵
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 ⁶			UL 94
0.031 in (0.8 mm)	V-1	V-1	
0.04 in (1.0 mm)	V-0	V-0	
0.08 in (2.0 mm)	• V-0 • 5VB	• V-0 • 5VB	
0.12 in (3.0 mm)	• V-0 • 5VA	• V-0 • 5VA	
Glow Wire Flammability Index ⁶			IEC 60695-2-12
0.08 in (2.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature ⁶			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	