

EMERGE™ PC 8130-13 Advanced Resin

Overview

EMERGE™ PC 8130-13 Advanced Resin is ignition-resistant and does not contain chlorinated, brominated or phosphate flame retardant additives. It is UV stabilized, contains mould release and has a UL f1 rating. This resin provides a property balance of flowability, high rigidity, dimensional stability and chemical solvent resistance to meet the needs of applications without painting or coating.

Applications:

- Enclosures
- Electrical applications
- Electronic accessories

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)	13 g/10 min	13 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
--	377000 psi	2600 MPa	ISO 527-1/1
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))	12 ft-lb/in	650 J/m	ASTM D256
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	
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
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
50 Hz	1.0E-3	1.0E-3	
1 MHz	2.0E-3	2.0E-3	
Arc Resistance	PLC 7	PLC 7	ASTM D495
Comparative Tracking Index			IEC 60112
0.0787 in (2.00 mm), Solution A	225 V	225 V	

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁴			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 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	
Oxygen Index ⁴	37 %	37 %	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 572 °F	270 to 300 °C	
Mold Temperature	158 to 230 °F	70 to 110 °C	