



EMERGE™ PC 8070-15 Advanced Resin

Overview

EMERGE™ PC 8070-15 advanced resin is an opaque, ignition resistant PC resin that contains no chlorinated or brominated or phosphorous based additives. This resin contains mould release and it is UV stabilized. It combines good mechanical and high heat properties and maintains excellent processability. EMERGE™ PC 8070-15 has a UL 94 V-0 rating at 0.7 mm. and is F1 rated according to UL746C

Applications:

- Electrical
- Electronics

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15 g/10 min	15 g/10 min	ISO 1133
Molding Shrinkage	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ISO 294-4
Outdoor Suitability	f1	f1	UL 746C
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	348000 psi	2400 MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield	8700 psi	60.0 MPa	
Break	10200 psi	70.0 MPa	
Tensile Strain			ISO 527-2
Yield	6.0 %	6.0 %	
Break	110 %	110 %	
Flexural Modulus	341000 psi	2350 MPa	ISO 178
Flexural Stress	13800 psi	95.0 MPa	ISO 178
Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength (73°F (23°C))	12 ft-lb/in ²	25 kJ/m ²	ISO 179/1eA
Notched Izod Impact Strength (73°F (23°C))	31 ft-lb/in ²	65 kJ/m ²	ISO 180/A
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Heat Deflection Temperature			
66 psi (0.45 MPa), Annealed	289 °F	143 °C	ISO 75-2/B
264 psi (1.8 MPa), Unannealed	255 °F	124 °C	ISO 75-2/A
264 psi (1.8 MPa), Annealed	284 °F	140 °C	ISO 75-2/A
Vicat Softening Temperature	298 °F	148 °C	ISO 306/B50
Ball Indentation Temperature	> 257 °F	> 125 °C	IEC 60335-1
CLTE - Flow	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	ISO 11359-2
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
1 Hz	1.0E-3	1.0E-3	
50 Hz	1.0E-3	1.0E-3	
Comparative Tracking Index (Solution A)	225 V	225 V	IEC 60112

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.028 in (0.70 mm) ¹	V-0	V-0	
0.08 in (2.0 mm)	5VB	5VB	
0.10 in (2.5 mm) ¹	5VA	5VA	
Glow Wire Flammability Index ¹			IEC 60695-2-12
0.04 in (1.0 mm)	1760 °F	960 °C	
0.08 in (2.0 mm)	1760 °F	960 °C	
0.12 in (3.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature ¹			IEC 60695-2-13
0.04 in (1.0 mm)	1470 °F	800 °C	
0.08 in (2.0 mm)	1470 °F	800 °C	
0.12 in (3.0 mm)	1470 °F	800 °C	
Oxygen Index ¹	35 %	35 %	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	> 572 °F	> 300 °C	
Mold Temperature	158 to 212 °F	70 to 100 °C	