



EMERGE™ PC 8110-15

Trinseo - Advanced Resin

Tuesday, November 5, 2019

General Information

Product Description

EMERGE™ PC 8110-15 advanced resin is an opaque, ignition resistant PC resin that contains no chlorinated or brominated or phosphorous based additives. This resin combines good mechanical and high heat properties and maintains excellent processability and contains mould release agent. EMERGE™ PC 8110-15 has a UL 94 V-0 rating at 1.0 mm.

Applications:

- Electrical
- Electronics

General

Material Status	• Commercial: Active
Availability	• Europe • North America
Additive	• Mold Release
Features	• Bromine Free • Chlorine Free • Flame Retardant • Good Processability • High Heat Resistance
Uses	• Electrical Housing • Electrical/Electronic Applications • Thin-walled Parts
Appearance	• Opaque
Forms	• Pellets

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ISO 1133
Molding Shrinkage	0.50 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	348000	psi	ISO 527-2/1
Tensile Stress (Yield)	8990	psi	ISO 527-2/50
Tensile Stress (Break)	8700	psi	ISO 527-2/50
Tensile Strain (Break)	110	%	ISO 527-2/50
Flexural Modulus ²	341000	psi	ISO 178
Flexural Stress ²	13800	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	12	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact Strength (73°F)	31	ft-lb/in ²	ISO 180/A
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ISO 2039-2
M-Scale	73		
R-Scale	118		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Annealed)	288	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	253	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	282	°F	ISO 75-2/A
Vicat Softening Temperature	295	°F	ISO 306/B50
Ball Indentation Temperature	> 257	°F	IEC 60335-1

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Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	3.9E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	430	V/mil	IEC 60243-1
Dielectric Constant			IEC 60250
1 Hz	2.70		
50 Hz	2.70		
Dissipation Factor			IEC 60250
1 Hz	1.0E-3		
50 Hz	1.0E-3		
Comparative Tracking Index (Solution A)	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating ³			UL 94
0.04 in	V-0		
0.08 in	V-0		
	5VB		
0.12 in	V-0		
	5VA		
Glow Wire Flammability Index ³			IEC 60695-2-12
0.04 in	1760	°F	
0.08 in	1760	°F	
0.12 in	1760	°F	
Glow Wire Ignition Temperature ³			IEC 60695-2-13
0.04 in	1560	°F	
0.08 in	1560	°F	
0.12 in	1560	°F	
Oxygen Index ³	40	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	500 to 572	°F
Mold Temperature	158 to 212	°F

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0.079 in/min

³ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.