

EMERGE™ PC 8410-10

Advanced Resin

Trinseo

Message:

EMERGE™ PC 8410-10 advanced resin is a transparent, ignition resistant PC resin, also available in opaque colors, that contains no chlorinated or brominated or phosphorous based additives. The resin is designed to meet the German norm DIN VDE-0472/Part 815 on halogens. This resin combines good mechanical and high heat properties, maintains excellent processability and contains mold release agent. EMERGE™ PC 8410-10 advanced resin has a UL94 V0 rating at 1.8 mm.

Applications:

A broad range of injection molded applications in the lighting, electronics, electrical and information technology equipment markets.

General Information			
UL YellowCard	E206114-100173345	E206114-101025745	E213639-100173353
	E54680-101960397		
Additive	Mold Release		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Processability		
	High Heat Resistance		
Uses	Electrical/Electronic Applications		
	Lighting Applications		
Agency Ratings	DIN VDE 0472 Part 815		
Appearance	Clear/Transparent		
	Colors Available		
	Opaque		
Forms	Pellets		
Processing Method	Injection Molding		
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)	10	g/10 min	ISO 1133
Molding Shrinkage	0.50 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2400	MPa	ISO 527-2/1
Tensile Stress			ISO 527-2/50
Yield	60.0	MPa	
Break	58.0	MPa	
Tensile Strain			ISO 527-2/50
Yield	6.0	%	

Break	> 100	%	
Flexural Modulus	2350	MPa	ISO 178
Flexural Stress	95.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	35	kJ/m ²	ISO 179/1eA
Notched Izod Impact Strength (23°C)	70	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Annealed	144	°C	ISO 75-2/B
1.8 MPa, Unannealed	125	°C	ISO 75-2/A
1.8 MPa, Annealed	141	°C	ISO 75-2/A
Vicat Softening Temperature	143	°C	ISO 306/B50
Ball Indentation Temperature	> 130	°C	IEC 60335-1
CLTE - Flow	7.0E-5	cm/cm/°C	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	17	kV/mm	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			UL 94
0.750 mm ¹	V-2		
1.50 mm ²	V-2		
1.80 mm	V-0		
3.00 mm ³	V-0		
Glow Wire Flammability Index ⁴			IEC 60695-2-12
1.00 mm	960	°C	
2.00 mm	960	°C	
3.00 mm	960	°C	
Glow Wire Ignition Temperature ⁵			IEC 60695-2-13
1.00 mm	800	°C	
2.00 mm	800	°C	
3.00 mm	800	°C	
Oxygen Index ⁶	40	%	ISO 4589-2
Needle Flame Test ⁷ (1.50 mm)	PASS		IEC 60695-2-2
Optical	Nominal Value	Unit	Test Method

Transmittance	87.0 to 91.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	> 300	°C	
Mold Temperature	70.0 to 100	°C	

NOTE

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