



EMERGE™ PC 8410-10

Trinseo - Advanced Resin

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General Information

Product Description

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

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 • Lighting Applications	
Agency Ratings	• DIN VDE 0472 Part 815		
Appearance	• Clear/Transparent	• Colors Available	• Opaque
Forms	• Pellets		
Processing Method	• Injection Molding		

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)	10	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)	8700	psi	ISO 527-2/50
Tensile Stress (Break)	8410	psi	ISO 527-2/50
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Strain (Break)	> 100	%	ISO 527-2/50
Flexural Modulus	341000	psi	ISO 178
Flexural Stress	13800	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	17	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact Strength (73°F)	33	ft-lb/in ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Annealed)	291	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	257	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	286	°F	ISO 75-2/A
Vicat Softening Temperature	289	°F	ISO 306/B50
Ball Indentation Temperature	> 266	°F	IEC 60335-1
CLTE - Flow	3.9E-5	in/in/°F	ISO 11359-2

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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			UL 94
0.030 in ²	V-2		
0.06 in ²	V-2		
0.07 in	V-0		
0.12 in ²	V-0		
Glow Wire Flammability Index ²			IEC 60695-2-12
0.04 in	1760 °F		
0.08 in	1760 °F		
0.12 in	1760 °F		
Glow Wire Ignition Temperature ²			IEC 60695-2-13
0.04 in	1470 °F		
0.08 in	1470 °F		
0.12 in	1470 °F		
Oxygen Index ²	40	%	ISO 4589-2
Needle Flame Test ² (59.1 mil)	PASS		IEC 60695-2-2
Optical	Nominal Value	Unit	Test Method
Transmittance	87.0 to 91.0	%	ASTM D1003

Processing Information

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

Notes

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

² This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.