



EMERGE™ PC 8410-22

Trinseo - Advanced Resin

Tuesday, November 5, 2019

General Information

Product Description

EMERGE™ PC 8410-22 advanced resin is a transparent, ignition resistant PC resin 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 and maintains excellent processability, it contains mould release agent. EMERGE™ PC 8410-22 has a UL 94 V-0 rating at 3.0 mm.

Applications:

- Electrical
- Enclosures
- Display
- Lighting

General

Material Status	• Commercial: Active		
Availability	• Europe	• North America	
Additive	• Mold Release		
Features	• Bromine Free • Chlorine Free	• Flame Retardant • Good Processability	• High Flow • High Heat Resistance
Uses	• Electrical Housing • Electrical/Electronic Applications	• Housings • Lighting Applications	
Agency Ratings	• DIN VDE 0472 Part 815		
Appearance	• Clear/Transparent		
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)	22	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
Tensile Stress (Yield)	8700	psi	ISO 527-2
Tensile Stress (Break)	10200	psi	ISO 527-2
Tensile Strain (Yield)	6.0	%	ISO 527-2
Tensile Strain (Break)	110	%	ISO 527-2
Flexural Modulus	341000	psi	ISO 178
Flexural Stress	13800	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	9.5	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact Strength (73°F)	29	ft-lb/in ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Annealed)	288	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	252	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	282	°F	ISO 75-2/A
Vicat Softening Temperature	297	°F	ISO 306/B50

EMERGE™ PC 8410-22

Trinseo - Advanced Resin

Thermal	Nominal Value	Unit	Test Method
Ball Indentation Temperature	> 257	°F	IEC 60335-1
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 ²			UL 94
0.030 in	V-2		
0.06 in	V-2		
0.12 in	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	35	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Transmittance ³	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.

³ standard tints