

EMERGE™ PC 8210-10

Advanced Resin

Trinseo

Message:

EMERGE™ PC 8210-10 advanced resin is a translucent, ignition resistant polycarbonate resin. This resin contains no bromine, chlorine, or phosphate flame retardants and is intended to comply with global environmental standards. It combines mechanical performance and high heat resistance with excellent processing characteristics in injection molded applications.

EMERGE™ PC 8210-10 has a UL 94 V-0 rating at 1.5 mm and 3.0 mm and UL 5VA rating at 3.0 mm.

Applications:

Electrical

Fixtures

Enclosures

General Information			
UL YellowCard	E206114-100173341	E213639-100173349	E54680-101960390
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Processability		
	High Heat Resistance		
Uses	Electrical/Electronic Applications		
	Housings		
Appearance	Translucent		
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
Tensile Stress			ISO 527-2
Yield	60.0	MPa	ISO 527-2
Break	70.0	MPa	
Tensile Strain			
Yield	6.0	%	ISO 178
Break	110	%	
Flexural Modulus	2350	MPa	ISO 178
Flexural Stress	95.0	MPa	
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	146	°C	ISO 306/B50
Ball Indentation Temperature	> 125	°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
Needle Flame Test (1.50 mm)	Pass		IEC 60695-11-5
Flammability	Nominal Value	Unit	Test Method
Flame Rating ¹			UL 94
1.50 mm	V-0		
	V-0		
3.00 mm	5VA		
Glow Wire Flammability Index ²			IEC 60695-2-12
1.00 mm	960	°C	
2.00 mm	960	°C	
3.00 mm	960	°C	
Glow Wire Ignition Temperature ³			IEC 60695-2-13
1.00 mm	850	°C	
2.00 mm	850	°C	
3.00 mm	850	°C	
Oxygen Index ⁴	37	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	260 to 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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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

