

EMERGE™ PC 8210-31

Advanced Resin

Trinseo

Message:

EMERGE™ PC 8210-31 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 8210-31 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
Additive	Mold Release		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Good Processability		
	High Heat Resistance		
Uses	Electrical/Electronic Applications		
	Housings		
Appearance	Opaque		
	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)	31	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	55.0	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)	15	kJ/m ²	ISO 179/1eA
Notched Izod Impact Strength (23°C)	55	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Annealed	137	°C	ISO 75-2/B
1.8 MPa, Unannealed	123	°C	ISO 75-2/A
1.8 MPa, Annealed	134	°C	ISO 75-2/A
Vicat Softening Temperature	141	°C	ISO 306/B50
Ball Indentation Temperature	> 123	°C	IEC 60335-1
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	800	°C	
2.00 mm	800	°C	
3.00 mm	800	°C	
Oxygen Index ⁴	40	%	ISO 4589-2
Needle Flame Test ⁵ (1.50 mm)	PASS		IEC 60695-2-2
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.		
2.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		

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

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