

EMERGE™ PC 4310-10

Advanced Resin

Trinseo

Message:

EMERGE™ PC 4310-10 Advanced Resin is a high-performance polycarbonate resin offering high heat resistance and maximum toughness. This resin is available in a full range of colors that can be custom tailored to meet your product requirements.

Applications:

Consumer electronics and information technology equipment

Computer and business equipment

Portable electronics

General Information			
UL YellowCard	E206114-228294		
Features	Good Toughness		
	High Heat Resistance		
Uses	Business Equipment		
	Electrical/Electronic Applications		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 3.20 mm, Injection Molded)	118		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (3.20 mm, Injection Molded)	2410	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, 3.20 mm, Injection Molded	60.0	MPa	
Break, 3.20 mm, Injection Molded	71.0	MPa	
Tensile Elongation (Break, 3.20 mm, Injection Molded)	150	%	ASTM D638
Flexural Modulus (3.20 mm, Injection Molded)	2410	MPa	ASTM D790
Flexural Strength (3.20 mm, Injection Molded)	96.5	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.20 mm, Injection Molded)	910	J/m	ASTM D256

Unnotched Izod Impact (23°C, 3.20 mm, Injection Molded)	No Break		ASTM D256
Instrumented Dart Impact ¹ (23°C, 3.20 mm, Injection Molded, Total Energy)	87.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Annealed, 3.99 mm	144	°C	
1.8 MPa, Unannealed, 3.99 mm	128	°C	
1.8 MPa, Annealed, 3.99 mm	141	°C	
Vicat Softening Temperature	149	°C	ASTM D1525 ²
CLTE - Flow (-40 to 80°C)	6.8E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	2.0E+17	ohms·cm	ASTM D257
Dielectric Strength	17	kV/mm	ASTM D149
Dielectric Constant			ASTM D150
60 Hz	3.00		
1 MHz	3.00		
Dissipation Factor			ASTM D150
60 Hz	1.0E-3		
1 MHz	2.0E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating ³			UL 94
1.59 mm	HB		
3.20 mm	HB		
Oxygen Index ⁴	26	%	ASTM D2863
NOTE			
1.	3.39 m/sec		
2.	Rate A (50°C/h), Loading 2 (50 N)		
3.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		
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