EMERGE™ PC 8230-10

Trinseo - Advanced Resin

Tuesday, November 5, 2019

General Information

Product Description

EMERGE™ PC 8230-10 is translucent, ultraviolet light resistance and 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.

Applications:

- Information technology equipment
- Electronics and electrical appliances

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Features	• Bromine Free • Chlorine Free	• Flame Retardant • Good Processability	• High Heat Resistance • UV Resistant
Uses	• Appliances	• Electrical Housing	• Electrical/Electronic Applications
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm³	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 (Break)	110	%	ISO 527-2/50
Flexural Modulus	338000	psi	ISO 178
Flexural Stress	13800	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	17	ft·lb/in²	ISO 179/1eA
Notched Izod Impact Strength (73°F)	33	ft·lb/in²	ISO 180/A
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness			ISO 2039-2
M-Scale	73		
R-Scale	118		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Annealed)	284	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	253	°F	ISO 75-2/A
Heat Deflection Temperature (264 psi, Annealed)	279	°F	ISO 75-2/A
Vicat Softening Temperature	289	°F	ISO 306/B50
Ball Indentation Temperature	> 257	°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 [2]			UL 94
0.06 in	V-0		
0.12 in	• V-0 • 5VA		
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

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	518 to 590	°F
Mold Temperature	140 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.