EMERGE™ PC 8600-20

Trinseo - Advanced Resin

General Information

Product Description

EMERGE™ PC 8600 is a translucent, ignition-resistant and easy flow polycarbonate resin. This resin contains no chlorinated, brominated or phosphate flame retardant additives and is intended to comply with global environmental standards. It has a UL94 flammability rating of V-0 at 1.5mm.

Applications:

- A broad range of injection molded applications in the electronics, electrical and information technology equipment markets.

General

Features	• Bromine Free • Chlorine Free	• Flame Retardant • High Flow	• Ignition Resistant
Uses	• Electrical Housing	• Electrical/Electronic Applications	
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Density	1.20	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	20	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	20	g/10 min	ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage	0.50 to 0.70	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [2]	334000	psi	ASTM D638
Tensile Strength [3] (Yield)	8700	psi	ASTM D638
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Strength [3] (Break)	8700	psi	ASTM D638
Tensile Stress (Break)	8410	psi	ISO 527-2/50
Tensile Elongation [3] (Yield)	6.0	%	ASTM D638
Tensile Strain (Yield)	6.0	%	ISO 527-2/50
Tensile Elongation [3] (Break)	110	%	ASTM D638
Tensile Strain (Break)	100	%	ISO 527-2/50
Flexural Modulus [4]	348000	psi	ASTM D790
Flexural Modulus [5]	348000	psi	ISO 178
Flexural Strength [4]	13800	psi	ASTM D790
Flexural Stress [5]	13600	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (73°F)	12	ft·lb/in	ASTM D256
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	123		ISO 2039-2

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	277	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	257	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed	252	°F	
Vicat Softening Temperature	298	°F	ASTM D1525 [6]
Vicat Softening Temperature			
--	289	°F	ISO 306/B50
--	302	°F	ISO 306/A120
Ball Indentation Temperature	> 257	°F	IEC 60335-1
CLTE - Flow (-40 to 176°F)	3.6E-5	in/in/°F	ASTM D696

Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+19	ohms·cm	ASTM D257
Dielectric Strength	640	V/mil	ASTM D149
Arc Resistance	PLC 7		ASTM D495

Flammability	Nominal Value	Unit	Test Method
Flame Rating [7]			UL 94
0.016 in	HB		
0.022 in	V-2		
0.04 in	V-1		
0.06 in	V-0		
0.10 in	V-0		
0.12 in	V-0		
Glow Wire Flammability Index [7] (0.08 in)	1760	°F	IEC 60695-2-12
Glow Wire Ignition Temperature [7] (0.08 in)	1470	°F	IEC 60695-2-13
Oxygen Index [7]	35	%	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 554	°F
Mold Temperature	158 to 230	°F

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 0.039 in/min

[3] 2.0 in/min

[4] 0.051 in/min

[5] 0.079 in/min

[6] Rate B (120°C/h), Loading 1 (10 N)

[7] This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.