TRINSEO™

EMERGE™ PC 8600-10
Advanced Resin

Overview

EMERGE™ PC 8600 is translucent, ignition-resistant polycarbonate resin. This resin contains no chlorinated, brominated or phosphate flame retardant additives and is intended to comply with global environmental standards. It is an easy flow PC resin suitable for use in injection molded applications in the computer, electronics, electrical, and information technology equipment markets.

Applications:

- Information technology equipment
- Electronics and electrical appliances
- Battery chargers and adaptors

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.20	g/cm³	1.20	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10	g/10 min	10	g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	0.50 to 0.70	%	ASTM D955
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus [1]	334000	psi	2300	MPa	ASTM D638
Tensile Strength [2]					ASTM D638
Yield	8700	psi	60.0	MPa	
Break	9430	psi	65.0	MPa	
Tensile Elongation [2]					ASTM D638
Yield	6.0	%	6.0	%	
Break	120	%	120	%	
Flexural Modulus [3]	348000	psi	2400	MPa	ASTM D790
Flexural Strength [3]	13800	psi	95.0	MPa	ASTM D790
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact (73°F (23°C))	14	ft·lb/in	750	J/m	ASTM D256
Instrumented Dart Impact [4]					ASTM D3763
73°F (23°C), Total Energy	513	in·lb	58.0	J	
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Rockwell Hardness (R-Scale)	123		123		ISO 2039-2
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
264 psi (1.8 MPa), Unannealed	259	°F	126	°C	
Vicat Softening Temperature	300	°F	149	°C	ASTM D1525 [5]
Ball Indentation Temperature	> 257	°F	> 125	°C	IEC 60335-1
CLTE - Flow (-40 to 176°F (-40 to 80°C))	3.6E-5	in/in/°F	6.5E-5	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Volume Resistivity	1.0E+19	ohms·cm	1.0E+19	ohms·cm	ASTM D257
Dielectric Strength	640	V/mil	25	kV/mm	ASTM D149
Arc Resistance	PLC 7		PLC 7		ASTM D495

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating [6]			UL 94
0.016 in (0.40 mm)	HB	HB	
0.022 in (0.55 mm)	V-2	V-2	
0.04 in (1.0 mm)	V-1	V-1	
0.06 in (1.5 mm)	V-0	V-0	
0.10 in (2.5 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	
Glow Wire Flammability Index [6]			IEC 60695-2-12
0.08 in (2.0 mm)	1760 °F	960 °C	
Glow Wire Ignition Temperature [6]			IEC 60695-2-13
0.08 in (2.0 mm)	1470 °F	800 °C	
Oxygen Index [6]	35 %	35 %	ISO 4589-2

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	248 °F	120 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Processing (Melt) Temp	518 to 572 °F	270 to 300 °C
Mold Temperature	158 to 230 °F	70 to 110 °C