TRINSEO

EMERGE™ PC 8600E50-20
Advanced Resin

Overview

EMERGE™ PC 8600E50-20 Advanced Resin contains 50% post consumer recycled (PCR) polycarbonate. This ignition resistant PC does not contain chlorinated, brominated or phosphate flame retardant additives to comply with global environmental standards. This resin combines good mechanical, thermal, and chemical properties while retaining excellent processability.

Applications

- Electronics and electrical
- Charger and adaptor enclosures
- Information technology equipment

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)	20	g/10 min	20	g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	0.50 to 0.70	%	ASTM D955 ISO 294-4
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	8700	psi	60.0	MPa	
Tensile Elongation [2]					ASTM D638
Yield	6.0	%	6.0	%	
Break	100	%	100	%	
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))	12	ft·lb/in	650	J/m	ASTM D256
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
264 psi (1.8 MPa), Unannealed	257	°F	125	°C	
Vicat Softening Temperature	298	°F	148	°C	ASTM D1525 [4]
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+17	ohms·cm	1.0E+17	ohms·cm	ASTM D257
--	> 1.0E+17	ohms·cm	> 1.0E+17	ohms·cm	IEC 60093
Dielectric Strength	560	V/mil	22	kV/mm	ASTM D149
Arc Resistance	PLC 7		PLC 7		ASTM D495

Flammability	Nominal Value (English)		Nominal Value (SI)		Test Method
Flame Rating [5]					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 [5]					IEC 60695-2-12
0.08 in (2.0 mm)	1760	°F	960	°C	
Glow Wire Ignition Temperature [5]					IEC 60695-2-13
0.08 in (2.0 mm)	1470	°F	800	°C	
Oxygen Index [5]	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