Technical Information

TRINSEO™

EMERGE™ PC 4430E75-13
Advanced Resin

Overview

EMERGE™ PC 4430E75-13 Advanced Polycarbonate Resin is a high performance compound containing 75% post consumer recycled (PCR) polycarbonate. This resin provides good surface durability to meet the needs of consumer electronics applications without coating or painting. It has a good balance of flow and toughness. This resin contains mold release and it is UV stabilized.

Applications

- Consumer Electronics
- Electronic Accessories
- Opaque Housings and Enclosures
- Portable Consumer Goods

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)	13	g/10 min	13	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]	319000	psi	2200	MPa	ASTM D638
Tensile Strength [2]					ASTM D638
Yield	7980	psi	55.0	MPa	
Break	8700	psi	60.0	MPa	
Tensile Elongation [2]					ASTM D638
Yield	5.5	%	5.5	%	
Break	100	%	100	%	
Flexural Modulus [3]	334000	psi	2300	MPa	ASTM D790
Flexural Strength [3]	13100	psi	90.0	MPa	ASTM D790
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact					ASTM D256
-22°F (-30°C)	8.4	ft·lb/in	450	J/m	
73°F (23°C)	12	ft·lb/in	650	J/m	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
66 psi (0.45 MPa), Unannealed	268	°F	131	°C	
264 psi (1.8 MPa), Unannealed	248	°F	120	°C	
Vicat Softening Temperature					
--	275	°F	135	°C	ASTM D1525 [4]
--	289	°F	143	°C	ASTM D1525 [5]
CLTE - Flow (-40 to 176°F (-40 to 80°C))	4.2E-5	in/in/°F	7.5E-5	cm/cm/°C	ASTM D696
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [6]					UL 94
0.020 in (0.50 mm), All	HB		HB		
0.12 in (3.0 mm), All	HB		HB		

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	500 to 572	°F	260 to 300	°C
Mold Temperature	176 to 248	°F	80 to 120	°C

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

[1] 0.039 in/min (1.0 mm/min)

[2] 2.0 in/min (50 mm/min)

[3] 0.051 in/min (1.3 mm/min)

[4] Rate A (50°C/h), Loading 2 (50 N)

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

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

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