TRINSEO

EMERGE™ PC 8310-10 (AP)
Advanced Resin

Overview

EMERGE* PC 8310-10 advanced resin is a transparent and ignition resistant PC resin that contains no chlorinated or brominated nor phosphorous-based additives. It is a transparent material with UL-94 V-0 rating at 2.5 mm.

Applications:

- Information Technology Equipment
- Sockets, Plugs and Switches
- Lighting

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	%	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus					ASTM D638
0.126 in (3.20 mm), Injection Molded	348000	psi	2400	MPa	
Tensile Strength					ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	8700	psi	60.0	MPa	
Break, 0.126 in (3.20 mm), Injection Molded	9570	psi	66.0	MPa	
Tensile Elongation					ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	6.0	%	6.0	%	
Break, 0.126 in (3.20 mm), Injection Molded	120	%	120	%	
Flexural Modulus					ASTM D790
0.126 in (3.20 mm), Injection Molded	348000	psi	2400	MPa	
Flexural Strength					ASTM D790
0.126 in (3.20 mm), Compression Molded	14500	psi	100	MPa	
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact					ASTM D256
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	17	ft·lb/in	900	J/m	
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
264 psi (1.8 MPa), Unannealed	262	°F	128	°C	
264 psi (1.8 MPa), Annealed	288	°F	142	°C	
Vicat Softening Temperature	306	°F	152	°C	ASTM D1525 [1]
CLTE - Flow (-40 to 180°F (-40 to 82°C))	3.8E-5	in/in/°F	6.8E-5	cm/cm/°C	ASTM D696
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [2]					UL 94
0.06 in (1.5 mm)	V-2		V-2		
0.10 in (2.5 mm)	V-0		V-0		
Optical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Transmittance	84.0 to 87.0	%	84.0 to 87.0	%	ASTM D1003

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	158 to 212	°F	70 to 100	°C