EMERGE™ PC 8110-15

Trinseo - Advanced Resin

General Information

Product Description

EMERGE™ PC 8110-15 advanced resin is an opaque, ignition resistant PC resin that contains no chlorinated, brominated or phosphate flame retardant additives. This resin combines good mechanical and high heat properties and maintains excellent processability and contains mould release agent. EMERGE™ PC 8110-15 has a UL 94 V-0 rating at 1.0 mm.

Applications:

- Electrical
- Electronics

General			
Additive	• Mold Release		
Features	• Bromine Free • Chlorine Free	• Flame Retardant • Good Processability	• High Heat Resistance • Ignition Resistant
Uses	• Electrical Housing	• Electrical/Electronic Applications	• Thin-walled Parts
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)	15	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [2]	334000	psi	ASTM D638
Tensile Modulus	348000	psi	ISO 527-1/1
Tensile Strength [3] (Yield)	8700	psi	ASTM D638
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Strength [3] (Break)	9430	psi	ASTM D638
Tensile Stress (Break)	8700	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)	120	%	ASTM D638
Tensile Strain (Break)	110	%	ISO 527-2/50
Flexural Modulus [4]	348000	psi	ASTM D790
Flexural Modulus [5]	341000	psi	ISO 178
Flexural Strength [4]	13800	psi	ASTM D790
Flexural Stress [5]	13800	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (73°F)	12	ft·lb/in²	ISO 179/1eA
Notched Izod Impact (73°F)	12	ft·lb/in	ASTM D256
Notched Izod Impact Strength (73°F)	31	ft·lb/in²	ISO 180/1A

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Annealed)	289	°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	255	°F	
Deflection Temperature Under Load (264 psi, Annealed)	282	°F	ISO 75-2/A
Vicat Softening Temperature	295	°F	ISO 306/B50
Ball Indentation Temperature	> 257	°F	IEC 60335-1
CLTE - Flow (-40 to 176°F)	3.6E-5	in/in/°F	ASTM D696
CLTE - Flow	3.9E-5	in/in/°F	ISO 11359-2

Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	430	V/mil	IEC 60243-1
Dissipation Factor			IEC 60250
50 Hz	1.0E-3		
1 MHz	2.0E-3		
Arc Resistance	PLC 7		ASTM D495
Comparative Tracking Index (0.0787 in, Solution A)	225	V	IEC 60112

Flammability	Nominal Value	Unit	Test Method
Flame Rating [6]			UL 94
0.031 in	V-1		
0.04 in	V-0		
0.08 in	• V-0 • 5VB		
0.12 in	• V-0 • 5VA		
Glow Wire Flammability Index [6] (0.08 in)	1760	°F	IEC 60695-2-12
Glow Wire Ignition Temperature [6] (0.08 in)	1560	°F	IEC 60695-2-13
Oxygen Index [6]	40	%	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 572	°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] This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.