



EMERGE™ PC 8330-22

Trinseo - Advanced Resin

General Information

Product Description

EMERGE™ PC 8330-22 advanced resin is a transparent, ignition resistant PC resin that contains no chlorinated, brominated or phosphate flame retardant additives. The resin is designed to meet the German norm DIN VDE-0472/Part 815 on halogens. This resin combines good mechanical and high heat properties and maintains excellent processability, contains mould release agent and is UV stabilized. EMERGE™ PC 8330-22 has a UL 94 V-0 rating at 2.5 mm.

Applications:

- Electrical
- Enclosures
- Display
- Lighting

General

Additive	<ul style="list-style-type: none"> • Mold Release • UV Stabilizer
Features	<ul style="list-style-type: none"> • Bromine Free • Chlorine Free • Flame Retardant • Good Processability • High Flow • High Heat Resistance • Ignition Resistant • UV Resistant
Uses	<ul style="list-style-type: none"> • Electrical Housing • Electrical/Electronic Applications • Housings • Lighting Applications
Agency Ratings	<ul style="list-style-type: none"> • DIN VDE 0472 Part 815
Appearance	<ul style="list-style-type: none"> • Clear/Transparent
Forms	<ul style="list-style-type: none"> • Pellets
Processing Method	<ul style="list-style-type: none"> • Injection Molding

Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Density	1.20	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22	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)	10200	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

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Mechanical	Nominal Value	Unit	Test Method
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)	9.5	ft-lb/in ²	ISO 179/1eA
Notched Izod Impact (73°F)	11	ft-lb/in	ASTM D256
Notched Izod Impact Strength (73°F)	29	ft-lb/in ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Annealed)	288	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed	255	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed	252	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi, Annealed)	282	°F	ISO 75-2/A
Vicat Softening Temperature	297	°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		
Comparative Tracking Index (0.0787 in, Solution A)	225	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁶			UL 94
0.06 in	V-2		
0.10 in	V-0		
Glow Wire Flammability Index ⁶ (0.08 in)	1760	°F	IEC 60695-2-12
Glow Wire Ignition Temperature ⁶ (0.08 in)	1470	°F	IEC 60695-2-13
Oxygen Index ⁶	35	%	ISO 4589-2
Optical	Nominal Value	Unit	Test Method
Light Transmittance ⁷	87.0 to 91.0	%	ASTM D1003

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	518 to 554	°F
Mold Temperature	158 to 230	°F