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EMERGE™ PC 8430-15

Trinseo - Advanced Resin

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General Information

Product Description

EMERGE™ PC 8430-15 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 8430-15 has a UL 94 V-0 rating at 1.8 mm.

Applications:

- Electrical
- Fixtures
- Enclosures
- Display
- Lighting

General			
Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Europe	• North America
Additive	• Mold Release	• UV Stabilizer	
Features	• Bromine Free • Chlorine Free • Flame Retardant	• Good Processability • High Heat Resistance • Ignition Resistant	• UV Resistant
Uses	• Electrical Housing • Electrical Housing	• Electrical/Electronic Applications • Lighting Applications	
Agency Ratings	• DIN VDE 0472 Part 815		
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20	g/cm³	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	0.50 to 0.70	%	ASTM D955
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [2]	2300	MPa	ASTM D638
Tensile Modulus	2400	MPa	ISO 527-1/1
Tensile Strength [3] (Yield)	60.0	MPa	ASTM D638
Tensile Stress (Yield)	60.0	MPa	ISO 527-2/50
Tensile Strength [3] (Break)	65.0	MPa	ASTM D638
Tensile Stress (Break)	70.0	MPa	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]	2400	MPa	ASTM D790

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Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus [5]	2350	MPa	ISO 178
Flexural Strength [4]	95.0	MPa	ASTM D790
Flexural Stress [5]	95.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	25	kJ/m²	ISO 179/1eA
Notched Izod Impact (23°C)	650	J/m	ASTM D256
Notched Izod Impact Strength (23°C)	65	kJ/m²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (0.45 MPa, Annealed)	143	°C	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed	125	°C	
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	124	°C	
Deflection Temperature Under Load (1.8 MPa, Annealed)	140	°C	ISO 75-2/A
Vicat Softening Temperature	148	°C	ISO 306/B50
Ball Indentation Temperature	> 125	°C	IEC 60335-1
CLTE - Flow (-40 to 80°C)	6.5E-5	cm/cm/°C	ASTM D696
CLTE - Flow	7.0E-5	cm/cm/°C	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	17	kV/mm	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 (2.00 mm, Solution A)	225	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating [6]			UL 94
0.75 mm	V-2		
1.5 mm	V-2		
1.8 mm	V-0		
3.0 mm	V-0		
Glow Wire Flammability Index [6] (2.0 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature [6] (2.0 mm)	800	°C	IEC 60695-2-13
Oxygen Index [6]	35	%	ISO 4589-2
Optical	**Nominal Value**	**Unit**	**Test Method**
Light Transmittance	87.0 to 91.0	%	ASTM D1003

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	270 to 300	°C
Mold Temperature	70 to 110	°C

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Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 1.0 mm/min

[3] 50 mm/min

[4] 1.3 mm/min

[5] 2.0 mm/min

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