

EMERGE™ PC 8701

Advanced Resin

Trinseo

Message:

EMERGE™ PC 8701 advanced resin is an ignition resistant, 10% glass reinforced, polycarbonate resin. This resin contains no bromine, chlorine or phosphate additives. The resin is designed to meet the German norm DIN VDE-0472/Part 815 (1989) on halogens. It is a medium flow PC resin with a mold release system, intended for injection molding applications.

Applications:

- Electrical meter
- Information Technology Equipment
- Other structural part

General Information			
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Additive	Mold Release		
Features	Bromine Free		
	Chlorine Free		
	Flame Retardant		
	Medium Flow		
Uses	Electrical/Electronic Applications		
	Structural Parts		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density	1.28	g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	8.0	g/10 min	ISO 1133
Molding Shrinkage - Flow	0.40 to 0.60	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
4.00 mm, Injection Molded	3950	MPa	ISO 527-2/1
4.00 mm, Injection Molded	4000	MPa	ISO 527-2/50
Tensile Stress			ISO 527-2/50
Yield, 4.00 mm, Injection Molded	65.0	MPa	
Break, 4.00 mm, Injection Molded	50.0	MPa	
Tensile Strain			ISO 527-2/50
Yield, 4.00 mm, Injection Molded	4.0	%	
Break, 4.00 mm, Injection Molded	9.0	%	
Flexural Modulus ¹ (4.00 mm, Injection Molded)	3800	MPa	ISO 178
Flexural Stress ² (4.00 mm, Injection Molded)	105	MPa	ISO 178

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength ³ (23°C, Injection Molded)	9.0	kJ/m ²	ISO 180/A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	141	°C	ISO 75-2/B
1.8 MPa, Unannealed	133	°C	ISO 75-2/A
1.8 MPa, Annealed	139	°C	ISO 75-2/A
Vicat Softening Temperature			
--	155	°C	ISO 306/A120
--	145	°C	ISO 306/B50
Ball Indentation Temperature	> 130	°C	IEC 60335-1
CLTE - Flow (-40 to 80°C)	1.5E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+14	ohms	IEC 60093
Volume Resistivity (2.00 mm)	1.0E+16	ohms·cm	IEC 60093
Electric Strength (2.00 mm)	> 70	kV/mm	IEC 60243-1
Dielectric Constant			IEC 60250
2.00 mm, 50 Hz	3.00		
2.00 mm, 1 MHz	3.10		
Dissipation Factor			IEC 60250
2.00 mm, 50 Hz	8.0E-3		
2.00 mm, 1 MHz	0.016		
Comparative Tracking Index (3.00 mm, Solution A)	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁴ (1.50 mm)	V-0		UL 94
Glow Wire Ignition Temperature ⁵			IEC 60695-2-13
1.00 mm	960	°C	
2.00 mm	960	°C	
3.00 mm	960	°C	
Oxygen Index ⁶	29	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	290 to 315	°C	
Mold Temperature	80.0 to 115	°C	
NOTE			
1.	2.0 mm/min		
2.	2.0 mm/min		
3.	4 mm		

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