

EMERGE™ PC 8701-15

Advanced Resin

Trinseo

Message:

EMERGE™ PC 8701 Advanced Resin is an ignition-resistant, 10% glass reinforced polycarbonate resin. This resin does not contain chlorine or bromine additives. It is a medium flow PC resin with a mold release system, intended for applications requiring high stiffness. EMERGE PC 8701 has a UL94 V-0 rating at 1.5 mm.

Main Characteristics:

Glass reinforced

Ignition resistant

Applications:

Powered Device Housings

Information technology equipment

Electrical parts

Other structural/internal parts

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight		
Additive	demoulding		
Features	Chlorine Free		
	Rigidity, high		
	Medium liquidity		
	Bromine-free		
	Flame retardancy		
Uses	Electrical/Electronic Applications		
	Electrical housing		
	Components		
	Shell		
Forms	Particle		
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)	15	g/10 min	ISO 1133
shrinkage-Flow	0.40 - 0.60	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
4.00, injection molding	3950	MPa	ISO 527-2/1
4.00, injection molding	4000	MPa	ISO 527-2/50
Tensile Stress			ISO 527-2/50
Yield, 4.00mm, injection molding	65.0	MPa	ISO 527-2/50
Fracture, 4.00mm, injection molding	50.0	MPa	ISO 527-2/50

Tensile Strain			ISO 527-2/50
Yield, 4.00mm, injection molding	4.0	%	ISO 527-2/50
Fracture, 4.00mm, injection molding	9.0	%	ISO 527-2/50
Flexural Modulus ¹ (23°C, 4.00 mm, Injection Molded)	3800	MPa	ISO 178
Flexural Stress ² (23°C, 4.00 mm, Injection Molded)	105	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact 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, not annealed	141	°C	ISO 75-2/B
1.8 MPa, not annealed	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
Dielectric Strength (2.00 mm)	> 70	kV/mm	IEC 60243-1
Dielectric Constant			IEC 60250
2.00 mm, 50 Hz	3.00		IEC 60250
2.00 mm, 1 MHz	3.10		IEC 60250
Dissipation Factor			IEC 60250
2.00 mm, 50 Hz	8.0E-3		IEC 60250
2.00 mm, 1 MHz	0.016		IEC 60250
Comparative Tracking Index (3.00 mm, Solution A)	200	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating ⁴ (1.5 mm)	V-0		UL 94
Glow Wire Ignition Temperature ⁵			IEC 60695-2-13
1.0 mm	960	°C	IEC 60695-2-13
2.0 mm	960	°C	IEC 60695-2-13
3.0 mm	960	°C	IEC 60695-2-13
Oxygen Index ⁶	29	%	ISO 4589-2
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	3.0 - 4.0	hr	
Processing (Melt) Temp	290 - 315	°C	

Mold Temperature	80 - 115	°C
NOTE		
1.	2.0 mm/min	
2.	2.0 mm/min	
3.	4 mm	
4.	This rating is not intended to reflect the danger caused by this or any other material under actual fire conditions.	
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