

EMERGE™ PC 4701-15

Advanced Resin

Trinseo

Message:

EMERGE™ PC 4701-15 Advanced resin is formulated with 10% glass fiber and proprietary flame retardant package. It provides superb ignition resistance, rigidity, dimension stability and heat resistance. EMERGE PC 4701-15 is designed for power tools, electrical appliances and electronics parts.

General Information			
Filler / Reinforcement	Glass Fiber, 10% Filler by Weight		
Features	Flame Retardant		
	Good Dimensional Stability		
	High Heat Resistance		
	High Rigidity		
Uses	Appliances		
	Electrical/Electronic Applications		
	Power/Other Tools		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.27	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.20 to 0.50	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 3.20 mm, Injection Molded)	122		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (3.20 mm, Injection Molded)	3650	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield, 3.20 mm, Injection Molded	65.5	MPa	
Break, 3.20 mm, Injection Molded	62.7	MPa	
Tensile Elongation (Break, 3.20 mm, Injection Molded)	4.0	%	ASTM D638
Flexural Modulus (3.20 mm, Injection Molded)	3790	MPa	ASTM D790
Flexural Strength (3.20 mm, Injection Molded)	109	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.20 mm, Injection Molded)	110	J/m	ASTM D256

Unnotched Izod Impact (23°C, 3.20 mm, Injection Molded)	40	J/m	ASTM D256
Tensile Impact Strength ¹ (23°C, 3.20 mm, Injection Molded)	147	kJ/m ²	ASTM D1822
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Annealed	149	°C	
1.8 MPa, Unannealed	141	°C	
1.8 MPa, Annealed	135	°C	
Vicat Softening Temperature	160	°C	ASTM D1525 ²
Ball Indentation Temperature	> 125	°C	IEC 60335-1
CLTE - Flow (-40 to 82°C)	3.8E-5	cm/cm/°C	ASTM D696
Flammability	Nominal Value	Unit	Test Method
Flame Rating ³			UL 94
1.60 mm	V-0		
3.20 mm	5VA		
Oxygen Index ⁴	38	%	ASTM D2863
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Processing (Melt) Temp	288 to 316	°C	
Mold Temperature	82.2 to 116	°C	
NOTE			
1.	Type S		
2.	Rate A (50°C/h), Loading 2 (50 N)		
3.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.		
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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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