TRINSEO™

EMERGE™ PC 4701-15
Advanced Resin

Overview

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.

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.27	g/cm³	1.27	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	15	g/10 min	ASTM D1238
Molding Shrinkage - Flow	2.0E-3 to 5.0E-3	in/in	0.20 to 0.50	%	ASTM D955
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus					ASTM D638
0.126 in (3.20 mm), Injection Molded	530000	psi	3650	MPa	
Tensile Strength					ASTM D638
Yield, 0.126 in (3.20 mm), Injection Molded	9500	psi	65.5	MPa	
Break, 0.126 in (3.20 mm), Injection Molded	9100	psi	62.7	MPa	
Tensile Elongation					ASTM D638
Break, 0.126 in (3.20 mm), Injection Molded	4.0	%	4.0	%	
Flexural Modulus					ASTM D790
0.126 in (3.20 mm), Injection Molded	550000	psi	3790	MPa	
Flexural Strength					ASTM D790
0.126 in (3.20 mm), Injection Molded	15800	psi	109	MPa	
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact					ASTM D256
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	2.0	ft·lb/in	110	J/m	
Unnotched Izod Impact					ASTM D256
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	0.75	ft·lb/in	40	J/m	
Tensile Impact Strength [1]					ASTM D1822
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	70.0	ft·lb/in²	147	kJ/m²	
Hardness	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Rockwell Hardness					ASTM D785
R-Scale, 0.126 in (3.20 mm), Injection Molded	122		122		
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
66 psi (0.45 MPa), Annealed	300	°F	149	°C	
264 psi (1.8 MPa), Unannealed	285	°F	141	°C	
264 psi (1.8 MPa), Annealed	275	°F	135	°C	
Vicat Softening Temperature	320	°F	160	°C	ASTM D1525 [2]
Ball Indentation Temperature	> 257	°F	> 125	°C	IEC 60335-1
CLTE - Flow (-40 to 180°F (-40 to 82°C))	2.1E-5	in/in/°F	3.8E-5	cm/cm/°C	ASTM D696
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [3]					UL 94
0.06 in (1.6 mm)	V-0		V-0		
0.13 in (3.2 mm)	5VA		5VA		
Oxygen Index [3]	38	%	38	%	ASTM D2863

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	250	°F	121	°C
Drying Time	3.0 to 4.0	hr	3.0 to 4.0	hr
Processing (Melt) Temp	550 to 600	°F	288 to 316	°C
Mold Temperature	180 to 240	°F	82 to 116	°C