TRINSEO™

EMERGE™ PC 4902
Advanced Resin

Overview

EMERGE™ PC 4902 Advanced Resin is a 20% glass fiber reinforced high flow ignition resistant polycarbonate resin. This grade provides flame rating UL 94 V0 at 1.6 mm without the use of brominated or chlorinated flame retardant additives. It has superior processability and is ideal for structural frame components which are moving towards thinner wall sections.

Applications:

- LCD Back Light Unit Frame Components
- Internal structural parts of Printers, Scanners, Copiers, Multifunction Office Automation Machines

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.33	g/cm³	1.33	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	25	g/10 min	25	g/10 min	ASTM D1238
Molding Shrinkage					ASTM D955
Flow	1.0E-3 to 5.0E-3	in/in	0.10 to 0.50	%	
Across Flow	4.0E-3 to 6.0E-3	in/in	0.40 to 0.60	%	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus [1]	986000	psi	6800	MPa	ASTM D638
Tensile Strength					ASTM D638
Yield [2]	13100	psi	90.0	MPa	
Break [3]	14500	psi	100	MPa	
Tensile Elongation [2] (Break)	4.0	%	4.0	%	ASTM D638
Flexural Modulus [4]	870000	psi	6000	MPa	ASTM D790
Flexural Strength [4]	21800	psi	150	MPa	ASTM D790
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact (73°F (23°C))	1.5	ft·lb/in	80	J/m	ASTM D256
Thermal	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Deflection Temperature Under Load					ASTM D648
264 psi (1.8 MPa), Unannealed	221	°F	105	°C	
CLTE - Flow (-40 to 176°F (-40 to 80°C))	3.7E-5	in/in/°F	6.6E-5	cm/cm/°C	ASTM D696
Flammability	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Flame Rating [5] (0.06 in (1.6 mm))	V-0		V-0		UL 94

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	203 to 230	°F	95 to 110	°C
Drying Time	4.0 to 7.0	hr	4.0 to 7.0	hr
Rear Temperature	500 to 536	°F	260 to 280	°C
Middle Temperature	518 to 554	°F	270 to 290	°C
Front Temperature	518 to 554	°F	270 to 290	°C
Nozzle Temperature	536 to 572	°F	280 to 300	°C
Processing (Melt) Temp	518 to 563	°F	270 to 295	°C
Mold Temperature	176 to 230	°F	80 to 110	°C