EMERGE™ PC/PET 9500CR

Advanced Resin

Trinseo

Message:

EMERGE™ PC/PET 9500CR Advanced Resin is a polycarbonate blend with excellent chemical and ignition resistance properties. This grade was designed for use in medical equipment housings and other applications that are subject to repeated exposure to a variety of cleaners and disinfectants commonly used in hospitals. This grade has good aesthetics and excellent toughness. It has a UL 94 rating of V0 at 2.0 mm.
Main Characteristics:
Tested under ISO 10993 (Parts 5 & 10)
Applications:
Medical device housings or enclosures

General Information			
UL YellowCard	E54680-101084582	E206114-101030949	E213639-102244291
Features	Flame Retardant Good Chemical Resistance Good Toughness Pleasing Surface Appearance		
Uses	Housings Medical/Healthcare Applications		
Forms	Pellets		
Processing Method	Injection Molding		
Multi-Point Data	Specific Heat vs. Temperature (ASTM D3417) Specific Volume vs Temperature (ISO 11403-2) Tensile Creep (ASTM D2990) Tensile Stress vs. Strain (ASTM D638) Thermal Conductivity vs. Temperature (ASTM E1530) Viscosity vs. Shear Rate (ASTM D3835)		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.29	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
260°C/5.0 kg	10	g/10 min	
265°C/5.0 kg	13	g/10 min	
Molding Shrinkage			ASTM D955
Flow	0.60 to 0.95	%	
Across Flow	0.50 to 0.70	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale, 3.20 mm, Injection Molded)	110		ASTM D785

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus [1] (3.20 mm, Injection Molded)	2330	MPa	ASTM D638
Tensile Strength [2]			ASTM D638
Yield, 3.20 mm, Injection Molded	53.0	MPa	
Break, 3.20 mm, Injection Molded	45.0	MPa	
Tensile Elongation [3]			ASTM D638
Yield, 3.20 mm, Injection Molded	4.1	%	
Break, 3.20 mm, Injection Molded	150	%	
Flexural Modulus [4] (3.20 mm, Injection Molded)	2270	MPa	ASTM D790
Flexural Strength [5] (3.20 mm, Injection Molded)	82.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (23°C, 3.20 mm, Injection Molded)	750	J/m	ASTM D256
Instrumented Dart Impact			ASTM D3763
0°C, 3.20 mm, Injection Molded, Peak Energy	49.0	J	
0°C, 3.20 mm, Injection Molded, Total Energy	62.0	J	
23°C, 3.20 mm, Injection Molded, Peak Energy	45.0	J	
23°C, 3.20 mm, Injection Molded, Total Energy	60.0	J	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	109	°C	
1.8 MPa, Unannealed	79.0	°C	
Vicat Softening Temperature	140	°C	ASTM D1525 [6]
CLTE - Flow (-40 to 80°C)	7.4E-5	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	5.2E+15	ohms	IEC 60093
Volume Resistivity	1.0E+18	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.60 mm, in Oil	31	kV/mm	
3.20 mm, in Oil	18	kV/mm	
Relative Permittivity			IEC 60250
100 Hz	3.28		
1 MHz	3.12		
Dissipation Factor			IEC 60250
100 Hz	3.0E-3		
1 MHz	0.020		
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94

1.50 mm [7]	V-1		
2.00 mm [8]	V-0		
2.50 mm [9]	5VA		
Glow Wire Flammability Index			IEC 60695-2-12
1.50 mm	825	°C	
2.00 mm	960	°C	
2.50 mm	960	°C	

Injection	Nominal Value	Unit
Drying Temperature	121	°C
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	249 to 282	°C
Mold Temperature	43.3 to 65.6	°C

NOTE	
1.	5.0 mm/min
2.	50 mm/min
3.	50 mm/min
4.	1.3 mm/min
5.	1.3 mm/min
6.	Rate B (120°C/h), Loading 1 (10 N)
7.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
8.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.
9.	This rating not intended to reflect hazards presented by this or any other material under actual fire conditions

Recommended distributors for this material

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