EMERGE™ PC/PET 9100CR

Advanced Resin

Trinseo

Message:

EMERGE™ PC/PET 9100CR advanced resin is a polycarbonate blend with excellent chemical resistance. This grade was designed for use in medical equipment housings and can withstand repeated exposure to a variety of cleaners and disinfectants commonly used in hospitals. This grade has good aesthetics and excellent toughness.
Main Characteristics:
Excellent chemical resistance
Tested under ISO 10993
UL listing for HB
Applications:
Medical device housings or enclosures

General Information		
UL YellowCard	E54680-100900977	E213639-100900976
Features	Good Chemical Resistance Good Toughness Pleasing Surface Appearance	
Uses	Housings Medical/Healthcare Applications	
Agency Ratings	ISO 10993 3	
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	1.23	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (260°C/5.0 kg)	8.5	g/10 min	ASTM D1238
Molding Shrinkage			ASTM D955
Flow	0.60 to 0.90	%	
Across Flow	0.50 to 0.80	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale, 3.20 mm, Injection Molded)	111		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**

Tensile Modulus [1] (3.20 mm, Injection Molded)	2210	MPa	ASTM D638
Tensile Strength [2]			ASTM D638
Yield, 3.20 mm, Injection Molded	50.0	MPa	
Break, 3.20 mm, Injection Molded	56.2	MPa	
Tensile Elongation [3]			ASTM D638
Yield, 3.20 mm, Injection Molded	4.7	%	
Break, 3.20 mm, Injection Molded	150	%	
Flexural Modulus [4] (3.20 mm, Injection Molded)	2100	MPa	ASTM D790
Flexural Strength [5] (3.20 mm, Injection Molded)	77.2	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact			ASTM D256
-30°C, 3.20 mm, Injection Molded	750	J/m	
23°C, 3.20 mm, Injection Molded	910	J/m	
Instrumented Dart Impact			ASTM D3763
-40°C, 3.20 mm, Injection Molded, Peak Energy	55.4	J	
-40°C, 3.20 mm, Injection Molded, Total Energy	80.2	J	
23°C, 3.20 mm, Injection Molded, Peak Energy	46.3	J	
23°C, 3.20 mm, Injection Molded, Total Energy	63.3	J	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	117	°C	
1.8 MPa, Unannealed	87.2	°C	
Vicat Softening Temperature	144	°C	ASTM D1525 [6]
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	4.3E+15	ohms	IEC 60093
Volume Resistivity	3.4E+15	ohms·cm	IEC 60093
Electric Strength			IEC 60243-1
1.60 mm, in Oil	28	kV/mm	
3.20 mm, in Oil	17	kV/mm	
Relative Permittivity			IEC 60250
100 Hz	3.28		
1 MHz	3.12		
Dissipation Factor			IEC 60250
100 Hz	2.0E-3		
1 MHz	0.020		
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating [7] (1.00 mm)	HB		UL 94

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 98.9	°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.

Recommended distributors for this material

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