EMERGE™ ABS 5102 MED

Trinseo - Advanced Resin

General Information

Product Description

EMERGE™ ABS 5102 MED is a 20% glass filled ABS for use in approved medical applications. This resin exhibits a property balance of flow, rigidity, and dimensional stability, and has undergone biocompatibility testing based on ISO 10993 (Biological Evaluation of Medical Devices).

Main Characteristics:

- Tested under ISO 10993
- Suitable for EtO and Radiation Steriliation

Applications:

- Medical Applications
- Surgical Device Handles
- Drug Delivery Devices
- Medical Equipment

General			
Filler / Reinforcement	• Glass Fiber, 20% Filler by Weight		
Features	• E-beam Sterilizable • Ethylene Oxide Sterilizable	• Good Dimensional Stability • Good Flow	• High Rigidity • Radiation Sterilizable
Uses	• Medical Devices	• Medical/Healthcare Applications	• Structural Parts
Appearance	• Opaque		
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.21		ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
220°C/10.0 kg	19	g/10 min	
230°C/3.8 kg	5.1	g/10 min	
Molding Shrinkage - Flow	1.5E-3 to 2.5E-3	in/in	ASTM D955
Molding Shrinkage - Across Flow	1.5E-3 to 2.5E-3	in/in	ASTM D955
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [2] (Yield)	10400	psi	ASTM D638
Tensile Strength [2] (Break)	10400	psi	ASTM D638
Tensile Elongation [2] (Yield)	3.5	%	ASTM D638
Tensile Elongation [2] (Break)	3.5	%	ASTM D638
Flexural Modulus	770000	psi	ASTM D790
Flexural Strength	14900	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (73°F, 0.126 in, Injection Molded)	1.0	ft·lb/in	ASTM D256
Unnotched Izod Impact			ASTM D4812
73°F, 0.126 in, Injection Molded	4.7	ft·lb/in	

EMERGE™ ABS 5102 MED

Trinseo - Advanced Resin

Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	207	°F	ASTM D648
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	196	°F	
Vicat Softening Temperature			
--	207	°F	ASTM D1525 [3]
--	223	°F	ASTM D1525 [4]

Processing Information		
Injection	**Nominal Value**	**Unit**
Drying Temperature	176	°F
Drying Time	3.0 to 4.0	hr
Processing (Melt) Temp	428 to 500	°F
Mold Temperature	68 to 140	°F