CALIBRE™ MEGARAD™ 2091-15

Polycarbonate Resin

Trinseo

Message:

CALIBRE™ MEGARAD™ 2091 Polycarbonate Resins are designed for single use medical devices (SUDs) that require gamma and electron-beam irradiation and an accelerated schedule for delivery of post-radiated products to customers - potentially 10 to 21 days sooner than currently available radiation-stabilized polycarbonate resins, depending on irradiation conditions. In addition, the resins are meant for applications that require a more water white appearance rather than the traditional purple tinted resin used to compensate for these sterilization methods. CALIBRE™ MEGARAD™ 2091-15 Polycarbonate Resin has undergone biocompatibility testing based on ISO 10993 standards (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications.
Main Characteristics
Tested under ISO 10993
Mold Release
Improved Color Compensation
Applications
Medical Applications

General Information			
Additive	Mold Release		
Features	Biocompatible E-beam Sterilizable Radiation Sterilizable		
Uses	Electrical/Electronic Applications Medical/Healthcare Applications		
Agency Ratings	ISO 10993		
Appearance	Water White		
Forms	Pellets		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.20	g/cm³	ASTM D792, ISO 1183/B
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ASTM D1238, ISO 1133
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955, ISO 294-4
Water Absorption			ASTM D570, ISO 62
23°C, 24 hr	0.15	%	
Equilibrium, 23°C, 50% RH	0.32	%	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	118		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
-- [1]	2300	MPa	ASTM D638
--	2300	MPa	ISO 527-2/50
Tensile Strength			

Yield [2]	62.1	MPa	ASTM D638
Yield	62.0	MPa	ISO 527-2/50
Break [3]	68.3	MPa	ASTM D638
Break	68.0	MPa	ISO 527-2/50
Tensile Elongation			
Yield [4]	6.0	%	ASTM D638
Yield	6.0	%	ISO 527-2/50
Break [5]	150	%	ASTM D638
Break	150	%	ISO 527-2/50
Flexural Strength			
-- [6]	96.5	MPa	ASTM D790
--	98.0	MPa	ISO 178
Taber Abrasion Resistance	45	%	ASTM D1044

Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
23°C	750	J/m	ASTM D256
23°C	75	kJ/m^2	ISO 180/A
Unnotched Izod Impact (23°C)	No Break		ASTM D256, ISO 180
Instrumented Dart Impact [7] (23°C, Total Energy)	81.3	J	ASTM D3763
Tensile Impact Strength	378	kJ/m^2	ASTM D1822

NOTE	
1.	50 mm/min
2.	50 mm/min
3.	50 mm/min
4.	50 mm/min
5.	50 mm/min
6.	Method I (3 point load), 2.0 mm/min
7.	3.39 m/sec

Recommended distributors for this material

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