CALIBRE™ 5201S-12
Polycarbonate Resin

Overview

CALIBRE™ 5201S-12 polycarbonate resin is 20% glass reinforced and contains silicone for improved lubricity. This resin exhibits high modulus and excellent dimensional stability. CALIBRE 5201S-12 has been tested according to ISO 10993 (Biological Evaluation of Medical Devices). It is suitable for radiation, ethylene oxide, and steam sterilization as needed in the health care industry.

Main Characteristics:

- Tested under ISO 10993
- Lubricious

Applications:

- Medical applications
- Surgical device handles

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.36	g/cm³	1.36	g/cm³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	12	g/10 min	12	g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage					ASTM D955
Flow	3.0E-3 to 4.0E-3	in/in	0.30 to 0.40	%	
Across Flow	5.0E-3 to 6.0E-3	in/in	0.50 to 0.60	%	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus					
-- [1]	856000	psi	5900	MPa	ASTM D638
--	812000	psi	5600	MPa	ISO 527-1/1
Tensile Strength					
Yield [2]	12300	psi	84.5	MPa	ASTM D638
Yield	12600	psi	87.0	MPa	ISO 527-2/5
Break [2]	12100	psi	83.4	MPa	ASTM D638
Break	12300	psi	85.0	MPa	ISO 527-2/5
Tensile Elongation					
Yield [2]	3.5	%	3.5	%	ASTM D638
Yield	3.2	%	3.2	%	ISO 527-2/5
Break [2]	3.7	%	3.7	%	ASTM D638
Break	3.5	%	3.5	%	ISO 527-2/5
Flexural Modulus					
--	783000	psi	5400	MPa	ASTM D790
-- [3]	783000	psi	5400	MPa	ISO 178
Flexural Strength					
--	18700	psi	129	MPa	ASTM D790
-- [3]	19600	psi	135	MPa	ISO 178
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact					
73°F (23°C)	1.6	ft·lb/in	85	J/m	ASTM D256
73°F (23°C)	10	ft·lb/in²	21	kJ/m²	ISO 180/1A

Thermal	Nominal Value (English)		Nominal Value (SI)		Test Method
Deflection Temperature Under Load					
66 psi (0.45 MPa), Unannealed	289	°F	143	°C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Unannealed	280	°F	138	°C	ASTM D648
264 psi (1.8 MPa), Unannealed	282	°F	139	°C	ISO 75-2/A
Vicat Softening Temperature					
--	311	°F	155	°C	ASTM D1525 [4]
--	295	°F	146	°C	ISO 306/B50

Injection	Nominal Value (English)		Nominal Value (SI)	
Drying Temperature	248	°F	120	°C
Drying Time	4.0	hr	4.0	hr
Suggested Max Moisture	0.020	%	0.020	%
Processing (Melt) Temp	545 to 599	°F	285 to 315	°C
Mold Temperature	176 to 230	°F	80 to 110	°C