CALIBRE™ 2061SP-15

Trinseo - Polycarbonate Resin

General Information

Product Description

CALIBRE™ 2061SP-15 is a medical grade polycarbonate resin containing silicone and PTFE. This resin is designed to have reduced coefficient of friction and improved wear properties. CALIBRE 2061SP-15 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
- Wear Resistant

Applications:

- Medical applications
- Surgical Device Handles
- Drug Delivery Devices

General			
Additive	• Mold Release	• PTFE Lubricant	• Silicone Lubricant
Features	• Biocompatible • Ethylene Oxide Sterilizable • Good Processability	• High Heat Resistance • High Impact Resistance • Lubricated	• Radiation Sterilizable • Steam Sterilizable • Wear Resistant
Uses	• Medical Devices	• Medical/Healthcare Applications	• Surgical Instruments
Agency Ratings	• ISO 10993 [1]		
Appearance	• Colors Available	• Opaque	
Forms	• Pellets		
Processing Method	• Injection Molding		

Properties [2]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.26		ASTM D792
Density	1.26	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ISO 1133
Molding Shrinkage - Flow	6.0E-3 to 8.0E-3	in/in	ASTM D955
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus [3]	305000	psi	ASTM D638
Tensile Modulus	297000	psi	ISO 527-1/1
Tensile Strength [4] (Yield)	7100	psi	ASTM D638
Tensile Stress (Yield)	7110	psi	ISO 527-2/50
Tensile Strength [4] (Break)	6300	psi	ASTM D638
Tensile Stress (Break)	6380	psi	ISO 527-2/50
Tensile Elongation [4] (Yield)	5.3	%	ASTM D638
Tensile Strain (Yield)	5.2	%	ISO 527-2/50
Tensile Elongation [4] (Break)	45	%	ASTM D638
Tensile Strain (Break)	50	%	ISO 527-2/50
Flexural Modulus	326000	psi	ASTM D790

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Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus [5]	312000	psi	ISO 178
Flexural Strength	11200	psi	ASTM D790
Flexural Stress [5]	10600	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (73°F)	5.6	ft·lb/in	ASTM D256
Notched Izod Impact Strength (73°F)	20	ft·lb/in²	ISO 180/1A
Instrumented Dart Impact [6] (73°F, Total Energy)	221	in·lb	ASTM D3763
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	279	°F	ASTM D648
Deflection Temperature Under Load (66 psi, Unannealed)	279	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	250	°F	
Deflection Temperature Under Load			ISO 75-2/A
264 psi, Unannealed	250	°F	
Vicat Softening Temperature	302	°F	ASTM D1525 [7]
Vicat Softening Temperature	289	°F	ISO 306/B50

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Processing (Melt) Temp	572 to 599	°F
Mold Temperature	176 to 230	°F

Notes

[1] Biocompatibility testing following ISO Guidelines 10993 has been completed on select classic resins in this series. Please consult Trinseo for details. ISO guidelines include a sensitization test.

[2] Typical properties: these are not to be construed as specifications.

[3] 0.039 in/min

[4] 2.0 in/min

[5] 0.079 in/min

[6] 21.7 ft/sec

[7] Rate B (120°C/h), Loading 1 (10 N)