



CALIBRE™ 2061-22

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 2061-22 resin is suitable for steam and ethylene oxide sterilization required by the health care industry. CALIBRE 2061-22 provides exceptional clarity, heat resistance, impact strength and processability, and has low contamination levels. CALIBRE 2061-22 resin has undergone biocompatibility testing based on ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. This product contains mold release.

Main Characteristics:

- Tested under ISO 10993

Applications:

- Medical applications

General

Material Status	• Commercial: Active
Availability	• Europe • Latin America • North America
Additive	• Mold Release
Features	• Biocompatible • High Clarity • Ethylene Oxide Sterilizable • High Heat Resistance • Steam Sterilizable • Good Processability • High Impact Resistance
Uses	• Medical/Healthcare Applications
Agency Ratings	• ISO 10993 ¹
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties ²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Density	1.20	g/cm ³	ISO 1183/B
Melt Mass-Flow Rate (300°C/1.2 kg)	22	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22	g/10 min	ISO 1133
Water Absorption (24 hr, 73°F)	0.15	%	ASTM D570
Water Absorption (24 hr, 73°F)	0.15	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.32	%	ASTM D570
Water Absorption (Equilibrium, 73°F, 50% RH)	0.32	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³	339000	psi	ASTM D638
Tensile Modulus	339000	psi	ISO 527-2/1
Tensile Strength ⁴ (Yield)	8700	psi	ASTM D638
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Strength ⁴ (Break)	9500	psi	ASTM D638
Tensile Stress (Break)	9570	psi	ISO 527-2/50
Tensile Elongation ⁴ (Break)	120	%	ASTM D638
Tensile Strain (Break)	120	%	ISO 527-2/50
Flexural Modulus ⁵	350000	psi	ASTM D790
Flexural Modulus ⁶	350000	psi	ISO 178

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Mechanical	Nominal Value	Unit	Test Method
Flexural Strength ⁵	14000	psi	ASTM D790
Flexural Stress ⁶	14000	psi	ISO 178
Taber Abrasion Resistance	45	%	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	14	ft-lb/in	ASTM D256
Notched Izod Impact Strength (73°F)	35	ft-lb/in ²	ISO 180/A
Instrumented Dart Impact ⁷ (73°F, Total Energy)	640	in-lb	ASTM D3763
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	118		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Annealed)	288	°F	ASTM D648
Heat Deflection Temperature (66 psi, Annealed)	288	°F	ISO 75-2/B
Deflection Temperature Under Load 264 psi, Unannealed	259	°F	ASTM D648
Heat Deflection Temperature (264 psi, Unannealed)	259	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi, Annealed)	258	°F	ASTM D648
Heat Deflection Temperature (264 psi, Annealed)	258	°F	ISO 75-2/A
Vicat Softening Temperature	306	°F	ASTM D1525 ⁸
Vicat Softening Temperature	306	°F	ISO 306/B50
CLTE - Flow (-40 to 180°F)	3.8E-5	in/in/°F	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	2.0E+17	ohms-cm	ASTM D257
Dielectric Strength	420	V/mil	ASTM D149
Electric Strength	430	V/mil	IEC 60243-1
Dielectric Constant			ASTM D150
60 Hz	3.00		
1 MHz	3.00		
Dissipation Factor			ASTM D150
50 Hz	1.0E-3		
1 MHz	2.0E-3		
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.06 in ⁹	HB		
0.12 in	HB		
0.030 in	V-2		
0.06 in	V-2		
Average Extent of Burning	1	in	ASTM D635
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Refractive Index	1.586		ISO 489
Transmittance	89.0	%	ASTM D1003
Haze	1.00	%	ASTM D1003

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Notes

- ¹ Biocompatibility testing following ISO Guidelines 10993 has been completed on select classic resins in this series. Please consult Styron 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 Method I (3 point load), 0.079 in/min
- ⁶ 0.079 in/min
- ⁷ 11.1 ft/sec
- ⁸ Rate A (50°C/h), Loading 2 (50 N)
- ⁹ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.