



CALIBRE™ 2061-3

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 2061-3 Polycarbonate resin is used in medical applications involving steam or ethylene oxide sterilization - though suitability for use in these applications is dependent upon autoclave cycle times and temperatures. CALIBRE 2061-3 provides exceptional clarity, heat resistance, impact strength, and processability, and has low contamination levels. CALIBRE 2061 has been evaluated by certain biocompatibility tests based on ISO 10993-1 (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	• Asia Pacific • North America
Additive	• Mold Release
Features	• Ethylene Oxide Sterilizable • High Clarity • High Impact Resistance • Good Processability • High Heat Resistance • Steam Sterilizable
Uses	• Medical/Healthcare Applications
Agency Ratings	• ISO 10993
Forms	• Pellets
Processing Method	• Injection Molding

ASTM & ISO Properties¹

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)	3.5	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	3.5	g/10 min	ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	ASTM D955
Molding Shrinkage - Flow	0.50 to 0.70	%	ISO 294-4
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 ²	360000	psi	ASTM D638
Tensile Modulus	360000	psi	ISO 527-2/1
Tensile Strength ³ (Yield)	8700	psi	ASTM D638
Tensile Stress (Yield)	8700	psi	ISO 527-2/50
Tensile Strength ³ (Break)	10400	psi	ASTM D638
Tensile Stress (Break)	10500	psi	ISO 527-2/50
Tensile Elongation ³ (Break)	150	%	ASTM D638
Tensile Strain (Break)	150	%	ISO 527-2/50
Flexural Modulus ⁴	350000	psi	ASTM D790

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Mechanical	Nominal Value	Unit	Test Method
Flexural Modulus ^{5, 6}	350000	psi	ISO 178
Flexural Strength ⁴	14000	psi	ASTM D790
Flexural Stress ^{5, 6}	13900	psi	ISO 178
Taber Abrasion Resistance	45	%	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	18	ft·lb/in	ASTM D256
Notched Izod Impact Strength (73°F)	44	ft·lb/in ²	ISO 180/A
Unnotched Izod Impact (73°F)	No Break		ASTM D256
Unnotched Izod Impact Strength (73°F)	No Break		ISO 180
Instrumented Dart Impact ⁷ (73°F, Total Energy)	830	in·lb	ASTM D3763
Tensile Impact Strength	300	ft·lb/in ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	74		
R-Scale	118		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Annealed)	295	°F	ASTM D648
Heat Deflection Temperature (66 psi, Annealed)	295	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	270	°F	
Heat Deflection Temperature (264 psi, Unannealed)	270	°F	ISO 75-2/A
Deflection Temperature Under Load (264 psi, Annealed)	289	°F	ASTM D648
Heat Deflection Temperature (264 psi, Annealed)	289	°F	ISO 75-2/A
Vicat Softening Temperature	304	°F	ASTM D1525 ⁸
Vicat Softening Temperature	304	°F	ISO 306/B50
CLTE - Flow (-40 to 180°F)	3.8E-5	in/in/°F	ASTM D696
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
0.12 in		HB	
0.030 in		V-2	
0.06 in		V-2	

Notes

¹ Typical properties: these are not to be construed as specifications.

² 0.039 in/min

³ 2.0 in/min

⁴ Method I (3 point load), 0.079 in/min

⁵ 0.079 in/min

⁶ 3-points

⁷ 11.1 ft/sec

⁸ Rate A (50°C/h), Loading 2 (50 N)