



CALIBRE™ 2061-6

Trinseo - Polycarbonate Resin

Tuesday, November 5, 2019

General Information

Product Description

CALIBRE™ 2061-6 resin is suitable for steam and ethylene oxide sterilization required by the health care industry. CALIBRE 2061-6 provides excellent heat resistance, impact strength, and processability. CALIBRE 2061-6 resin has been tested according to ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. This product contains mold release and is currently available in black color.

Main Characteristics:

- Tested under ISO 10993

Applications:

- Medical applications

General

Material Status	• Commercial: Active
Availability	• North America
Additive	• Mold Release
Features	• Ethylene Oxide Sterilizable • High Heat Resistance • Steam Sterilizable • Good Processability • High Impact Resistance
Uses	• Medical/Healthcare Applications
Agency Ratings	• ISO 10993 ¹
Appearance	• Black
Forms	• Pellets

ASTM & ISO Properties ²

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (300°C/1.2 kg)	6.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	ASTM D955
Water Absorption (24 hr, 73°F)	0.15	%	ASTM D570
Water Absorption (Equilibrium, 73°F, 50% RH)	0.32	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³	350000	psi	ASTM D638
Tensile Strength ⁴ (Yield)	9000	psi	ASTM D638
Tensile Strength ⁴ (Break)	9900	psi	ASTM D638
Tensile Elongation ⁴ (Yield)	6.0	%	ASTM D638
Tensile Elongation ⁴ (Break)	150	%	ASTM D638
Flexural Modulus ⁵	350000	psi	ASTM D790
Flexural Strength ⁵	14000	psi	ASTM D790
Taber Abrasion Resistance	45	%	ASTM D1044
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (73°F)	16	ft-lb/in	ASTM D256
Unnotched Izod Impact (73°F)	No Break		ASTM D256
Instrumented Dart Impact (73°F, Total Energy)	790	in-lb	ASTM D3763
Tensile Impact Strength (73°F)	270	ft-lb/in ²	ASTM D1822

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Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	73		
R-Scale	118		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Annealed)	293	°F	ASTM D648
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	265	°F	
Deflection Temperature Under Load (264 psi, Annealed)	288	°F	ASTM D648
Vicat Softening Temperature	312	°F	ASTM D1525 ⁶
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
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
0.12 in	HB		
0.030 in	V-2		
0.06 in	V-2		
Oxygen Index ⁷	26	%	ISO 4589-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	250	°F
Drying Time	3.0	hr
Suggested Max Moisture	0.020	%
Suggested Max Regrind	25	%
Rear Temperature	520 to 550	°F
Middle Temperature	530 to 570	°F
Front Temperature	570 to 620	°F
Nozzle Temperature	570 to 620	°F
Processing (Melt) Temp	570 to 620	°F
Mold Temperature	170 to 230	°F
Screw Speed	40 to 70	rpm
Clamp Tonnage	2.0 to 5.0	tons/in ²
Screw L/D Ratio	15.0:1.0	
Screw Compression Ratio	1.5:1.0 to 3.0:1.0	

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Notes

- ¹ Biocompatibility testing following ISO Guidelines 10993 has been completed on select classic resins in this series. Please consult Dow 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 Rate A (50°C/h), Loading 2 (50 N)
- ⁷ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.