

Technical Information



CALIBRE™ 2061-10

Polycarbonate Resin

Overview

CALIBRE™ 2061-10 resin provides exceptional clarity, heat resistance, impact strength, processability, and has low contamination levels. CALIBRE 2061-10 resin has been tested according to ISO 10993 (Biological Evaluation of Medical Devices) and is suitable for use in approved medical applications. It is compatible with most medical sterilization methods.

Main Characteristics:

- Tested under ISO 10993
- Contains Mold Release

Applications:

- Medical Applications
- Surgical Device Handles
- Drug Delivery Devices
- Fluid Delivery Applications

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm ³	1.20 g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	10 g/10 min	10 g/10 min	ASTM D1238 ISO 1133
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3 in/in	0.50 to 0.70 %	ASTM D955 ISO 294-4
Water Absorption			ISO 62
Saturation, 73°F (23°C)	0.32 %	0.32 %	
Equilibrium, 73°F (23°C), 50% RH	0.12 %	0.12 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	334000 psi	2300 MPa	ISO 527-1/1
Tensile Strength			
Yield ¹	8700 psi	60.0 MPa	ASTM D638
Yield	8700 psi	60.0 MPa	ISO 527-2/50
Break ¹	10300 psi	71.0 MPa	ASTM D638
Break	10300 psi	71.0 MPa	ISO 527-2/50
Tensile Elongation			
Yield ¹	6.0 %	6.0 %	ASTM D638
Yield	6.0 %	6.0 %	ISO 527-2/50
Break ¹	130 %	130 %	ASTM D638
Break	140 %	140 %	ISO 527-2/50
Flexural Modulus			
--	350000 psi	2410 MPa	ASTM D790
-- 2, 3	348000 psi	2400 MPa	ISO 178
Flexural Strength			
--	14000 psi	96.5 MPa	ASTM D790
-- 2, 3	14100 psi	97.0 MPa	ISO 178

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	6.2 ft-lb/in ²	13 kJ/m ²	
73°F (23°C)	17 ft-lb/in ²	35 kJ/m ²	
Notched Izod Impact			
73°F (23°C)	16 ft-lb/in	880 J/m	ASTM D256
73°F (23°C)	43 ft-lb/in ²	90 kJ/m ²	ISO 180/1A
Instrumented Dart Impact ⁴			ASTM D3763
73°F (23°C), Total Energy	783 in-lb	88.5 J	
Tensile Impact Strength	248 ft-lb/in ²	522 kJ/m ²	ASTM D1822
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			ASTM D785
M-Scale	73	73	
R-Scale	118	118	
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
66 psi (0.45 MPa), Annealed	291 °F	144 °C	ASTM D648 ISO 75-2/B
264 psi (1.8 MPa), Unannealed	262 °F	128 °C	ASTM D648
264 psi (1.8 MPa), Unannealed	257 °F	125 °C	ISO 75-2/A
264 psi (1.8 MPa), Annealed	286 °F	141 °C	ASTM D648 ISO 75-2/A
Vicat Softening Temperature	295 °F	146 °C	ISO 306/B50
CLTE - Flow			
-40 to 176°F (-40 to 80°C)	3.8E-5 in/in/°F	6.8E-5 cm/cm/°C	ASTM D696
--	3.9E-5 in/in/°F	7.0E-5 cm/cm/°C	ISO 11359-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Volume Resistivity	> 1.0E+15 ohms-cm	> 1.0E+15 ohms-cm	IEC 60093
Electric Strength	430 V/mil	17 kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.00	3.00	
1 MHz	3.00	3.00	
Dissipation Factor			IEC 60250
100 Hz	1.0E-3	1.0E-3	
1 MHz	2.0E-3	2.0E-3	
Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating ⁵			UL 94
0.12 in (3.0 mm)	HB	HB	
0.030 in (0.75 mm)	V-2	V-2	
0.11 in (2.8 mm)	V-2	V-2	
Optical	Nominal Value (English)	Nominal Value (SI)	Test Method
Refractive Index	1.586	1.586	ASTM D542 ISO 489
Light Transmittance	87.0 to 91.0 %	87.0 to 91.0 %	ASTM D1003
Haze	< 1.00 %	< 1.00 %	ASTM D1003
Injection	Nominal Value (English)	Nominal Value (SI)	
Drying Temperature	248 °F	120 °C	
Drying Time	4.0 hr	4.0 hr	
Processing (Melt) Temp	554 to 590 °F	290 to 310 °C	
Mold Temperature	158 to 212 °F	70 to 100 °C	

Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

¹ 2.0 in/min (50 mm/min)

² 0.079 in/min (2.0 mm/min)

³ 3-points

⁴ 10.8 ft/sec (3.30 m/sec)

⁵ This rating not intended to reflect hazards presented by this or any other material under actual fire conditions.

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