CALIBRE™ 2061-6
Polycarbonate Resin

Overview

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

Physical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Density	1.20	g/cm³	1.20	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	6.0	g/10 min	6.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	5.0E-3 to 7.0E-3	in/in	0.50 to 0.70	%	ASTM D955
Water Absorption					ASTM D570
24 hr, 73°F (23°C)	0.15	%	0.15	%	
Equilibrium, 73°F (23°C), 50% RH	0.32	%	0.32	%	
Mechanical	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Tensile Modulus [1]	350000	psi	2410	MPa	ASTM D638
Tensile Strength [2]					ASTM D638
Yield	9000	psi	62.1	MPa	
Break	9900	psi	68.3	MPa	
Tensile Elongation [2]					ASTM D638
Yield	6.0	%	6.0	%	
Break	150	%	150	%	
Flexural Modulus [3]	350000	psi	2410	MPa	ASTM D790
Flexural Strength [3]	14000	psi	96.5	MPa	ASTM D790
Taber Abrasion Resistance	45	%	45	%	ASTM D1044
Impact	**Nominal Value**	**(English)**	**Nominal Value**	**(SI)**	**Test Method**
Notched Izod Impact (73°F (23°C))	16	ft·lb/in	850	J/m	ASTM D256
Unnotched Izod Impact (73°F (23°C))	No Break		No Break		ASTM D256
Instrumented Dart Impact					ASTM D3763
73°F (23°C), Total Energy	790	in·lb	89.3	J	
Tensile Impact Strength (73°F (23°C))	270	ft·lb/in²	567	kJ/m²	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					ASTM D648
66 psi (0.45 MPa), Annealed	293	°F	145	°C	
264 psi (1.8 MPa), Unannealed	265	°F	129	°C	
264 psi (1.8 MPa), Annealed	288	°F	142	°C	
Vicat Softening Temperature	312	°F	156	°C	ASTM D1525 [4]
CLTE - Flow (-40 to 180°F (-40 to 82°C))	3.8E-5	in/in/°F	6.8E-5	cm/cm/°C	ASTM D696

Electrical	Nominal Value	(English)	Nominal Value	(SI)	Test Method
Volume Resistivity	2.0E+17	ohms·cm	2.0E+17	ohms·cm	ASTM D257
Dielectric Strength	420	V/mil	17	kV/mm	ASTM D149
Dielectric Constant					ASTM D150
60 Hz	3.00		3.00		
1 MHz	3.00		3.00		
Dissipation Factor					ASTM D150
50 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					UL 94
0.12 in (3.0 mm)	HB		HB		
0.030 in (0.75 mm)	V-2		V-2		
0.06 in (1.5 mm)	V-2		V-2		
Oxygen Index [5]	26	%	26	%	ISO 4589-2

Injection	Nominal Value	(English)	Nominal Value	(SI)
Drying Temperature	250	°F	121	°C
Drying Time	3.0	hr	3.0	hr
Suggested Max Moisture	0.020	%	0.020	%
Suggested Max Regrind	25	%	25	%
Rear Temperature	520 to 550	°F	271 to 288	°C
Middle Temperature	530 to 570	°F	277 to 299	°C
Front Temperature	570 to 620	°F	299 to 327	°C
Nozzle Temperature	570 to 620	°F	299 to 327	°C
Processing (Melt) Temp	570 to 620	°F	299 to 327	°C
Mold Temperature	170 to 230	°F	77 to 110	°C
Screw Speed	40 to 70	rpm	40 to 70	rpm
Clamp Tonnage	2.0 to 5.0	tons/in²	2.8 to 6.9	kN/cm²
Screw L/D Ratio	15.0:1.0		15.0:1.0	
Screw Compression Ratio	1.5:1.0 to 3.0:1.0		1.5:1.0 to 3.0:1.0	

Notes

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

[1] 0.039 in/min (1.0 mm/min)

[2] 2.0 in/min (51 mm/min)

[3] Method I (3 point load), 0.079 in/min (2.0 mm/min)

[4] Rate A (50°C/h), Loading 2 (50 N)

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

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