

CALIBRE™ 2060-6

Polycarbonate Resin

Overview

CALIBRE™ 2060-6 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 2060-6 provides exceptional clarity, heat resistance, impact strength, and processability, and has low contamination levels. The CALIBRE 2000 series of resins have been evaluated by certain biocompatibility tests based on on ISO 10993-1 (Biological Evaluation of Medical Devices) and are suitable for use in approved medical applications.

Main Characteristics:

- Tested under ISO 10993 and USP
- FDA 21 CFR 177.1580

Applications:

- Medical applications

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.20 g/cm³	1.20 g/cm³	ASTM D792 ISO 1183/A
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	6.0 g/10 min	6.0 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			ASTM D570 ISO 62
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
--	350000 psi	2410 MPa	ISO 527-2/1
Tensile Strength			
Yield ²	8700 psi	60.0 MPa	ASTM D638
Yield	8700 psi	60.0 MPa	ISO 527-2/50
Break ²	10500 psi	72.4 MPa	ASTM D638
Break	10400 psi	72.0 MPa	ISO 527-2/50
Tensile Elongation			
Break ²	150 %	150 %	ASTM D638
Break	150 %	150 %	ISO 527-2/50
Flexural Modulus			
-- ³	350000 psi	2410 MPa	ASTM D790
-- ⁴	350000 psi	2410 MPa	ISO 178
Flexural Strength			
-- ³	14000 psi	96.5 MPa	ASTM D790
-- ⁴	13900 psi	96.0 MPa	ISO 178
Taber Abrasion Resistance	45 %	45 %	ASTM D1044

Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Notched Izod Impact			
73°F (23°C)	17 ft·lb/in	910 J/m	ASTM D256A
73°F (23°C)	42 ft·lb/in ²	88 kJ/m ²	ISO 180/A
Unnotched Izod Impact (73°F (23°C))	No Break	No Break	ASTM D256 ISO 180
Instrumented Dart Impact ⁵ (73°F (23°C))	800 in·lb	90.4 J	ASTM D3763
Tensile Impact Strength	280 ft·lb/in ²	588 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	

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 (50 mm/min)

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

⁴ 0.079 in/min (2.0 mm/min)

⁵ 11.1 ft/sec (3.39 m/sec)



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