

Benz G3X p-GMA/HEMA (Hioxifilcon B)

Specifications

Water Content (%)	49
Dk (35°C, Fatt Units)	15
Refractive Index Dry	1.507
Refractive Index Hydrated (35°C)	1.425
Linear Expansion (mm)	1.300
Radial Expansion (mm)	1.300
Hardness (Shore D)	90
% Transmission (@600 nm)	>95
Standard size	Diameter - 12.70 mm, Thickness - 5.0mm
Standard Colors	Clear, Low Blue, High Blue
UV Blocker	Available upon request
Pre-cut	Depth - 1.5mm /2.0mm, Radius - 6.8mm

Note: Optional sizing and colors may be available on request.

Manufacturing

Environment Control:

We recommend maintaining a maximum Relative Humidity of 45% at 21±2°C

Diamond Tooling:

Tooling	Radius (mm)
Rough	0.400
Fine	0.300

Machining Recommendations:

Base Curve	Speed (RPM)	Feed (mm/min)	Depth (mm)
Rough	10,000	90	0.30
Fine	9,500	15	0.095
Front Curve	Speed (RPM)	Feed (mm/min)	Depth (mm)
Rough	10,000	53	0.300
Fine	9,500	15	0.080

Benz R&D validates expansion values

Machining parameters and tool specifications are important for optimum surface finish and reaching precise target every time. Benz R&D validates the expansion values, target hitting ability and surface quality of every lot of Benz materials when machined strictly according to recommendations.

Hydration/Sterilization

Polishing

To polish use XPAL, Alox 721 or comparable material. Polishing should require a maximum of 20 seconds under the above machining conditions.

Hydration

Lenses made with G-Materials will hydrate much faster than lenses made from other materials of comparable water content. Place lenses into the Borate Buffer pH 7.2 isotonic saline and allow the lens to sit in solution while stirring for a minimum of 6 hours. Hydrate for the minimum time specified at constant temperature ($T = 20 \pm 2^\circ\text{C}$). A minimum of 10 ml per lens should be used for hydration.

After hydration, lenses should be rinsed, autoclaved, and stored in the pH 7.2 buffered saline solution for packaging and sterilization.

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Hydration/Sterilization (continued)

Isotonic Saline

Borate Buffer pH 7.2; 295 mOs

NaCl 8.01 grams • H3BO3 2.47 grams • Na2B4O7 . 10H2O 0.14 grams

The weights for the buffered saline formulas are based on a 1 Liter Volume solution. The borate solution shows excellent performance through the sterilization process (autoclaving) and leaves the lenses free of residue.

Technical drawings

