

TECHNICAL DATA

Contaflex GM3

Special Attributes

Nature: Terpolymer based on glycerol methacrylate

The GM3 range of materials is available in two water contents 49% and 58%, based on high purity glycerol methacrylate, these materials are remarkably easy to machine. Resultant lenses are extremely durable, resilient to protein build up and can be used for a variety of wearing regimens.

Material Characteristics

PROPERTY	CONTAFLEX GM3 49%	CONTAFLE GM3 58%
Classification	Filcon I 2	Filcon II 2
USAN	Acofilcon B	Acofilcon A
Ionic or Non-Ionic	Non-Ionic	Non-Ionic
Swell Factor at 20°C	1.29	1.38
Water Content at 20°C	50 % by refractometer 48 % by weight	59 % by refractometer 57.5 % by weight
Refractive Index	1.522 Dry 1.416 Hydrated	1.523 Dry 1.402 Hydrated
Light Transmission	>94 %	>95 %
Oxygen Permeability (ISO) at 35° [barrers]	15.9	25.5
Density	1.226 g/cm ³ Dry 1.142 g/cm ³ Hydrated	1.222 g/cm ³ Dry 1.103 g/cm ³ Hydrated
Tensile Strength	0.6 MPa	0.4 MPa
Elongation to Break	212 %	196 %
Shore D Hardness	87	88
Handling Tints	Clear, Blue	Clear, Blue
Diameter	12.70 mm	12.70 mm
Thickness	5.00 mm	5.00 mm

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Machining Recommendations

LATHE TYPE	RPM	BULK CUT	FINE CUT
Manual	7,000	0.50 - 0.70 mm	0.05 mm
CNC	7,000	0.50 - 0.70 mm	0.05 mm
Air Bearing	8,000	0.50 - 0.70 mm	0.03 - 0.05 mm

Diamond Tooling

TOOLING	RADIUS
Rough	0.30 - 0.50 mm
Fine	0.30 - 0.50 mm

Environment Control

For best manufacturing conditions Contamac recommends 19-23°C with a relative humidity of 45% - 60%

Polishing

The recommended polishing compound is Contapol 2 with a spindle speed of 3,500 rpm and weight of 240gms. With the above machining recommendations polishing should require a maximum of 30 seconds.

Hydration

Hydration of GM3 materials is best performed in buffered saline with a PH of 6.8 - 7.3.

Manufacturing Consumables

- High melt blocking wax
- High melt blocking beewax
- Kemdent Blocking Wax
- Water soluble wax
- Contapol 1 polishing Compound
- Contapol 2 polishing Compound
- Cotton polishing cloth
- Delrin polishing cup
- Delrin polishing sponge
- Roller sponges

CASE STUDY

Accessories

- Tweezers
- Hydratation baskets
- Glass Vials
- Stoppers
- Aluminium top seals
- Flip tear up seals
- Shrink wrap sleeves
- Double soft lens mailers
- Net vial sleeves
- DMV soft lens remover
- Lens catch mat

Reference

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