

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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