

## TECHNICAL DATA

### Contaflex GM Advance

#### Special Attributes

Nature: Highly water retentive terpolymer based on glycerol methacrylate

The GM Advance material is the latest in soft lens material innovation. This material is provided in 49% and 58% water contents both offering lower modulus figures and therefore greater flexibility when machined to a finished soft contact lens. This quality is matched by the correct blend of tensile strength and elongation characteristics ensuring low levels of lens breakage and greater durability. Water loss from a soft lens causes dimensional change that will usually result in base curve steepening. GM Advance is more dimensionally stable than other GMA based materials and much more stable than other soft lens materials. The slower a material dehydrates in the atmosphere, the more likely it is to retain water in the eye. Similarly, a fast hydrating material is also likely to be of benefit, as it will be able to replenish itself more rapidly during the blink cycle. GM Advance resists dehydration longer and re-hydrates faster than comparable materials.

**Please Note:** Regulatory requirements and standards vary from country to country, and are constantly evolving. As a global company we want to be sure we provide you with detailed technical information, specific to your market, where appropriate, rather than using the condensed and simplified technical information on the website. If you need to use technical data for quality paperwork, or for a regulatory submission, please contact your account manager to obtain this precise and detailed information to support your regulatory requirements, we will be happy to help.

#### Material Characteristics

PROPERTY	CONTAFLEX GM ADVANCE 49%	CONTAFLE GM ADVANCE 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	1.28	1.36
Water Content at 20°C	50 % by refractometer 49 % by weight	60 % by refractometer 59 % by weight
Refractive Index Hydrated	1.417 at 20°C 1.419 at 35°C	1.400 at 20°C 1.398 at 35°C
Refractive Index Dry	1.515 at 20°C	1.515 at 20°C
Light Transmission	>94 %	>94 %
Oxygen Permeability (ISO) at 35° (barrers)	16	26
Tensile Strength	0.35 MPa	0.14 MPa
Elongation to Break	210 %	140 %
Modulus	0.36 MPa	0.16 MPa

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PROPERTY	CONTAFLEX GM ADVANCE 49%	CONTAFLE GM ADVANCE 58%
Shore D Hardness	86	83
Handling Tints	Clear, Blue	Clera, Blue
Diameter	12.70 mm	12.70 mm
Thickness	5.00 mm	5.00 mm

Please note: These are typical values. Always check the certificate of compliance supplied with the goods for the actual values of the batch.

### Machining Recommendations

LATHE TYPE	RPM	BULK CUT	FINE CUT
Manual	8,000 - 10,000	0.50 mm	0.05 mm
CNC	8,000 - 10,000	0.50 mm	0.05 mm
Air Bearing	10,000	0.50 mm	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 240 gms. With the above machining recommendations polishing should require a maximum of 30 seconds.

### Hydration

Hydration of GM Advance materials is best performed in buffered saline, with a PH of 6.8 - 7.5.

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### 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

### 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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