

## TECHNICAL DATA

### Contaflex FDA

#### Special Attributes

Employing a novel polymerisation technique together with using the highest purity monomers produces the Contaflex range of FDA approved soft contact lens materials. This results in a range of soft lens materials with water contents from 38% to 55% that exhibit zero stress and excellent machinability. Each of the products has their own benefit, the lower water content materials have greater lens stability and higher tensile strength and suit daily wear applications. The mid water content materials offer a greater Dk that leads to more comfortable wearing characteristics and excellent clarity of vision.

#### Material Characteristics

PROPERTY	POLYMACON 38%	METHAFILCON 55%
Classification	Filcon 11	Filcon IV 2
USAN	Polymacon	Methafilcon
Ionic or Non-Ionic	Non-Ionic	Ionic
Swell Factor at 20°C	1.20	1.35
Water Content at 20°C	38 % by refractometer 40 % by weight	55 % by refractometer 55 % by weight
Light Transmission	>96 %	>94.8 %
Oxygen Permeability (ISO) at 35° (barrers)	7.9	19.5
Refractive Index	1.51 Dry 1.438 Hydrated	1.51 Dry 1.407 Hydrated
Density	1.27 g/cm <sup>3</sup> Dry 1.17 g/cm <sup>3</sup> Hydrated	1.28 g/cm <sup>3</sup> Dry 1.07 g/cm <sup>3</sup> Hydrated
Tensile Strength	0.44 MPa	0.47 MPa
Elongation to Break	136 %	140 %
Shore D Hardness	88	88
Specific Gravity	1.19	1.16
Handling Tints	Clear, Blue, Violet, Green	Clear, Blue
UV Blocker	On request	On request

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PROPERTY	POLYMACON 38%	METHAFILCON 55%
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	7,000	0.5 mm	0.10 mm
CNC	8,000	0.5 mm	0.10 mm
Air Bearing	9,000	0.5 mm	0.10 mm

### Diamond Tooling

TOOLING	RADIUS
Rough	0.50 mm
Fine	0.30 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 320 gms. With the above machining recommendations polishing should require a maximum of 30 seconds.

### Hydration

Hydration of the Polymacon and Hefilcon materials is best performed in buffered saline with a PH of 6.8 - 7.5.

To ensure complete hydration of lenses manufactured from our Methafilcon material, a two-step hydration process is required. Step 1: Place the dry finished lenses in a pH 8.2 isotonic saline solution for a minimum of 15 hours, in a controlled environment at 20°C +/- 2°C.

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Carbonate Buffered Saline pH 8.2 (1 litre)  
NaCl (Sodium Chloride) 8.00 grams  
NaHCO<sub>3</sub> (Sodium Bicarbonate) 1.50 grams

Step 2: Place the hydrated lenses into a pH 7.2 isotonic saline solution and store the lenses for at least 2 hours. The lenses will now have full total hydration and will be ready for final parameter measurement.

Borate Buffered Saline pH 7.2 (1 litre)  
NaCl (Sodium Chloride) 8.00 grams  
H<sub>3</sub>B<sub>3</sub>O<sub>3</sub> (Boric Acid) 2.47 grams  
Na<sub>2</sub>B<sub>4</sub>O<sub>7</sub> · 10H<sub>2</sub>O (Sodium Tetraborate decahydrate) 0.14 grams

### 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

The values quoted on this data sheet are indicative of the typical values that can be obtained for the material. For the complete specification, please contact Contamac at +44 (0)1799 514800 or [sales@contamac.co.uk](mailto:sales@contamac.co.uk). Unauthorised copy or reproduction of the above information is strictly prohibited without the prior consent of Contamac Ltd.

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