

# GELFLEX GAS PERMEABLE TRI CURVE

## LENS DESIGN

Gelflex Gas Permeable Tri Curve contact lenses excel with long-term wearing comfort and optical characteristics.

### ADVANTAGES

- Unique and well-established Tri Curve lens, designed by experienced Gelflex contact lens specialists.
- High oxygen permeability. Gelflex recommends Harmony Plus Dk of 97 and Boston XO Dk of 100.
- Tri Curveal back surface geometry.
- Optimal edge design.
- Well-balanced thickness ratio, from center to edge.
- Ideal fitting possible.
- Stability.
- Excellent reproducibility.
- Excellent surface quality.
- Good wetting characteristics.

### INDICATIONS

- Increased oxygen requirement of the eye.
- Ametropia to +/-20.00D.
- Corneal astigmatism.
- Increased daily wearing times.

### PRECISION ENGINEERING

Gelflex Gas Permeable Tri Curve contact lenses are made on a precision diamond turned lathe from a range of the best gas permeable material blanks available worldwide.

Computerised DAC 4-axis CNC lathes are used to manufacture Gelflex Gas Permeable Tri Curve contact lenses. Finished lenses are produced in a series of process controlled steps. The necessary cutting and polishing processes are combined with extreme precision, which ensures lenses are consistently reproducible.

The entire production method, from the blanks to the process materials and the monitoring of the machining centers, is constantly supervised to guarantee quality. The use of advanced technology in the production of Gelflex Gas Permeable Tri Curve contact lenses results in excellent surface and optical quality.

### LENS DESIGN

The Gelflex Gas Permeable Tri Curve contact lens has been designed to achieve the following:

- Excellent wearing comfort and a prolonged wearing period, even on the first day.
- Superior tear exchange.
- Stable centering.
- Ease of fitting.
- Stability and security of the lens during wear.

The CAD designed surfaces and edge profile are precision tuned to an accuracy of  $\pm 10$  Micron at a controlled air bearing spindle speed. This results in an extremely smooth surface finish requiring minimal polishing.

This positioning and shape of the edge is designed to minimise awareness at the lid margin and conjunctiva with the blink action.



# GELFLEX GAS PERMEABLE ASPHERIC

## FITTING GUIDE & LENS CARE

### FLUORESCEIN

As with standard PMMA lenses, the fluorescein pattern test is used with Gelflex Gas Permeable Tri Curve contact lenses to assess fit and to observe the tear layer area and thickness of the tear film, rate of tear exchange and any corneal staining should be examined.

### ASSESSMENT OF FLUORESCEIN PATTERN

#### *Recommended Fit*

The tear film is distributed almost uniformly over the area of the cornea beneath the lens, although it may be a little thicker over the central area and a little thinner at the periphery of the steepest meridian.

#### *Flat Fit*

There is contact between the lens and the central area of the cornea and along much of the flattest meridian. The tear film is thin in these areas but somewhat thicker toward the periphery of the steepest meridian.

#### *Steep Fit*

There is marked contact between the cornea and the periphery of the lens and a thick tear film is formed over the central area. The tear film is thin around most of the periphery.

### FITTING

The same basic rules apply for the fitting of Gelflex Gas Permeable Tri Curve contact lenses as for other rigid contact lenses. The Tri Curve back surface geometry of the lens means that certain specific fitting rules have to be borne in mind when judging the fit of the lens.

Gelflex Gas Permeable Tri Curve contact lenses should always be fitting in such a way that it centers superiorly and is mobile, since the metabolism of the eye can only be maintained by a constant tear interchange. The fact that the lens material is oxygen permeable should not tempt the fitter to fit Gelflex Gas Permeable Tri Curve contact lenses steeply, as this may result in a lens which does not move adequately on the eye. Aim for the best possible distribution of pressure. A lens which adheres to the eye is unacceptable.

It is generally found that the base curve of the lens will be between 0.05 and 0.10 steeper than the flattest K reading for the correct lens/cornea fitting.

### LENS POWER

As with all contact lenses, the power of Gelflex Gas Permeable Tri Curve contact lenses depends on the spectacle refraction, the vertex distance and the tear layer.

The expected lens power is determined in the following way:

1. Starting from the sphere of the spectacle refraction (transposed to a minus cylinder) the vertex distance is adjusted with the vertex distance conversion table.
2. If the lens radius is the same as the flattest (on K) corneal radius, the tear lens has no optical effect (i.e. the sphere spectacle correction corrected for back vertex power is the lens power ordered).
3. The power will have to be altered when:
  - If fitting the base curve of a lens flatter than the flattest K, the lens power needs to be adjusted by adding +0.25 dioptre change for every 0.05 base curve change.
  - If fitting the base curve of a lens steeper than the flattest K, the lens power needs to be adjusted by adding -0.25 dioptre change for every 0.05 base curve change.

### LENS CARE

The care of Gelflex Gas Permeable Tri Curve contact lenses demands special attention with regard to the choice of care solutions, since not all available preparations are suitable.

- Gelflex Gas Permeable Tri Curve contact lenses should only be cleaned and soaked in the recommended cleaning solution.
- Gelflex recommends the Boston lens care regimen.
- Cleaning solutions with high concentrations of alcohol must never be used for Gelflex Gas Permeable Tri Curve contact lenses, as they will damage the lens.
- High temperatures will permanently damage Gelflex Gas Permeable Tri Curve contact lenses, so avoid any form of heat disinfection.

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