



# Lens file: Proclear Multifocal Toric

Continuing our series of features looking at specialist contact lenses, **Jonathan Walker** describes a monthly replacement lens for correcting presbyopia and astigmatism

**P**roclear Multifocal Toric is a monthly disposable toric soft lens developed for the ever-increasing number of presbyopic astigmats.<sup>1</sup> It is an extension to the already well established Proclear Multifocal lens, utilising both the patented Balanced Progressive Technology and the PC technology behind the omafilcon A material. The Proclear material resists dehydration, thus making it an ideal choice for the presbyopic patient.

## Applications

A recent study by Young *et al.*,<sup>2</sup> who analysed over 11,000 spectacle prescriptions, found that the prevalence of patients with one eye having astigmatism of 0.75 or more was 47 per cent, or both eyes having astigmatism of 0.75 or more 31 per cent. These figures indicate that almost one in three of our soft lens patients, at least, should be wearing a toric, and indeed when we look at the number of toric soft lenses fitted in the single-vision format, it is approaching 30 per cent.<sup>3</sup>

So the question to be asked is why are there so few toric multifocals? A toric soft single-vision lens, with a power range of +8.00D to -10.00D, with four cyls 10° around the clock, requires over 4,500 SKUs (stock keeping units). If we now multiply that by four, because we would require it in four reading additions, the inventory of lenses would be huge, approaching several thousand lenses. This type of financial investment far exceeds the return a company would get from the sale of lenses, which is the main reason it does not make financial sense to keep an inventory of disposable toric soft multifocals.

The FIPS manufacturing technique developed by CooperVision at its Scotsville facility in the US manages to address this problem. Producing over 2.2 million lenses a year allows the lens to be delivered in less than a week.

## Technical features

The Proclear Multifocal Toric front surface is lathe cut, enabling both

**TABLE 1**  
Summary of technical features

Material	Omafilcon A
Manufacturing process	FIPS
Water content	59%
Base curve	8.4mm 8.8mm
Diameter	14.4mm
Spherical power	+6.50 to -6.50D (0.25 steps) +7.00 to +20.00D (0.50 steps) -7.00 to -20.00D (0.50 steps)
Cylinder power	-0.75 to -5.75DC (0.50 steps)
Axes	5° to 180° (5°steps)
Reading additions	+1.00 to +4.00D (0.50 steps)
Dk (ISO 9913-1-1998)	25
Wearing schedule	Monthly replacement



**Figure 1**  
DAC lathes at the Scotsville plant

the spherical power and reading addition to be worked to individual requirements, while the pre-moulded back surface carries the cylinder correction at the appropriate axis. All toric soft lenses have to be stabilised and the lens incorporates two methods of reducing lens rotation; firstly, this is generated by the back surface toricity; and additionally, the front surface has a dual slab-off creating thin zones both inferiorly and superiorly.

Figure 1 shows the DAC lathes that the plant Scotsville uses to produce the complex front surface. The specifications of the Proclear Multifocal Toric are shown in Table 1.

When fitting a patient in soft contact lenses, the practitioner not only needs to choose the correct power, base curve and diameter but also needs to give serious consideration to the material. By their very nature, multifocal soft lenses will be fitted on a more mature patient age group. Many will have a compromised tear film with a somewhat unstable lipid layer; these patients are often asymptomatic until we apply a contact lens.

We know that the very act of placing a contact lens on the eye will disrupt the sensitive balance between polar and nonpolar lipids in the tear film, pushing the patient into becoming symptomatic. This will often manifest itself as a contact lens-induced evaporative dry eye, where patients get symptoms of dryness only when wearing lenses.

The Proclear material has a tendency to resist dehydration and in fact remains the only material that the US Food and Drug Administration approves for patients who have contact lens-induced dry eye.<sup>4</sup> This material can resist dehydration because it contains phosphorylcholine (PC), a phosphorylated alcohol that is present in mammalian cell membranes and provides a biocompatibility that mimics a cellular interface.

Based on the polar nature of the



## ADDITIONAL FITTING TIPS

- With low cyls, check the keratometry readings to establish that the spectacle astigmatism is corneal. Without this you are relying on just the dual slab-off to stop the lens rotating
- Try to ensure you have the maximum positive power by completing the refraction with a binocular balance ie Humphriss
- With low reading adds (+1.00D to +1.50D), try using a D/D combination
- With higher reading adds try increasing the distance power by +0.50D in the N lens as opposed to increasing the reading addition

phosphate group in the PC molecule, you could deduce that it plays a role in hydrogen bonding with water molecules, and thus hydration of the contact lens. In addition, the hydrophilicity of omafilcon A tends to results in resistance to protein and lipid deposition.

## Fitting procedure

### ● Choosing the base curve

Proclear Multifocal Toric comes in two base curves – 8.4 and 8.8. Start with the 8.8 base curve lens and assess the fit with the push-up test. The lens should move freely when pushed up, and return with a couple of blinks. If this does not happen, and the lens does not return and remains dislodged, then it probably requires the 8.4 lens.

### ● Assessing lens orientation

Fitting a Proclear Multifocal Toric is no different from fitting any other soft toric. It is best to fit empirically by ordering a pair of diagnostic trial lenses to the spectacle prescription. It is imperative that on-eye assessment is carried out as it must be remembered that two assessments are made of the position of the lens: firstly, where does the lens position itself when the eye is in primary gaze; and secondly, orientation with the blink.

To do this, horizontal laser markings can be quite clearly seen without having to disturb the eye by pulling the lower lid down as you do when there are vertical laser markings. The patient should be seated at the slit lamp and asked to gaze not at the fixation light but to look straight ahead at the letter chart behind the practitioner. This means that the patient is adopting the normal position of primary gaze, and the laser markings can be observed so that they are positioned horizontally.

A good tip here is to swing the slit beam through 90° so it is horizontal, reduce the beam width until it is very narrow, and place this beam over the laser markings. Any rotation away from

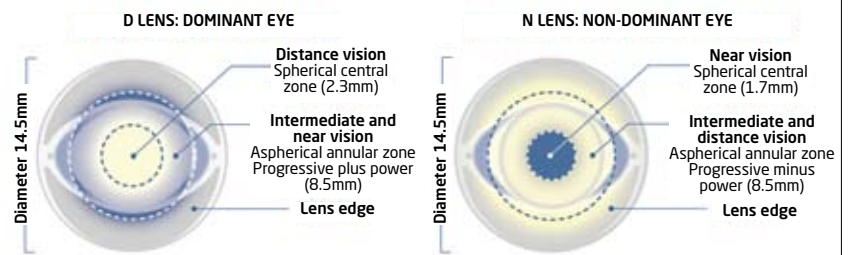


Figure 2 Balanced Progressive Technology

the normal horizontal positioning can then be noted. The normal principle of CAAS (clockwise add/anticlockwise subtract) applies here to determine the cylinder axis.

### ● Choosing the axis

Once the orientation of the lens has been noted, assessment needs to be made of rotational movement with the blink; a good tip here is to relate the laser markings to the numbers on a clock, with the normal horizontal position being across the 9 to 3 o'clock position. It must be remembered that if the lens moves from the horizontal to the 10 to 4 o'clock position, it will have moved 30°, which is somewhat excessive and the corresponding vision would be quite poor.

### ● Getting the prescription right

The design this multifocal utilises is what CooperVision calls Balanced Progressive Technology. This technology consists of two front-surface designs: a 'D' (distance or dominant) lens and an 'N' (near or non dominant) lens (Figure 2). This approach has a monovision aspect, but the effect is all multifocal.

The D lens design features distance correction at its centre, surrounded by a progressive intermediate, which is encircled by a spherical near correction. The N lens design follows an opposite pattern with near correction at the centre, surrounded by a negative progressive zone and spherical distance zone.

Although you choose one eye for the D lens and the other for the N lens, both lenses are multifocal and it is common for patients to have good monocular acuities in either or both eyes. The D and N designation is important to note when fitting and ordering lenses.

### ● Getting the Ds and Ns correct

To achieve maximum success with the lens it is vital that the ocular dominance is determined accurately. It has now become well established that finger pointing, or sighting dominance is an unreliable method of managing dominance. Today, the blur suppression test offers greater accuracy

and consistency, and is easy to carry out. Simply hold the patient's reading addition over each eye, and note the eye that creates most blur; this will be the dominant eye and requires the D lens.

## Conclusions

Fitting presbyopes with contact lenses can be very satisfying as these patients have reached that stage in their lives where they rely on the services of their eye care practitioner. They are also more aware of the benefits of a regular eye examination. With the Proclear Multifocal Toric we can extend the benefits of contact lens correction to a wider range of presbyopes, and also improve vision in astigmats who have been wearing non-toric lenses.

Those with high visual demands may want the flexibility of being able to wear progressive spectacles at work, and then wear Proclear Multifocal Torics for leisure. Patients with fewer demands at near wearing Proclear Multifocal Torics full time will have freedom from spectacles. You will find that many of these patients will not be aware that they are suitable for contact lenses and that fitting them is a terrific practice builder. ●

## References

- 1 Akerman DA. 40 is the New 20/20 – presbyopia equals opportunity. *Contact Lens Spectrum*, 2010;25:3.
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- 3 Efron N, Morgan PB, Helland M *et al*. Soft toric contact lens prescribing in different countries. *Cont Lens Anterior Eye*, 2011;34:1 36-38.
- 4 Lemp M, Caffery B, Lebow K *et al*. Omafilcon A (Proclear) soft contact lenses in a dry eye population. *CLAO J*, 1999; 25:1 40-47.

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