## **CHAPTER 9**



## SOFT CONTACT LENS DESIGNS

All soft lenses are fitted 1–2 mm larger than the horizontal visible iris diameter (HVID). The overall lens thickness profile is important when calculating local oxygen availability. Since, there is little tear mixing under a soft lens. Soft lenses are typically fitted flatter than the flattest corneal curvature by 1–1.2 mm and the front and back optic zone radii determine the power of the lens. Peripheral curve radii and widths are also used to improve the lens relationship with the ocular surface. The material properties of a lens have a significant effect on the fitting behaviour, comfort, durability and oxygen transmissibility of a soft lens. Water content can vary between 25-75% depending on the material and this along with the centre thickness can influence the pervaporation qualities of the lens. A high-water content lens with thin design can lead to pervaporation and corneal desiccation due to bulk flow of water through the lens and instability of water flow at the lens surface. High water content lenses lose more water than lower water content lenses even when worn in high humidity environments. These lenses are also prone to on-eye lens shrinkage, which affects the lens diameter and base curve. Thin lenses can flex excessively, causing problems with vision as well as corneal wrinkling and staining. Lower power minus lenses (< -2.00D) are typically made slightly thicker with larger front optic zone diameters to improve handling, while higher power minus lenses typically have a constant centre thickness. In plus lenses, the thickness cannot be decreased as it is a function of the back vertex power of the lens. Furthermore, decreasing the front optic zone diameter can interfere with vision, especially in patients with larger pupil sizes. Lens thickness is classified as thin below 0.1 mm, ultrathin below 0.07 mm and super-thin or hyper-thin below 0.05 mm.

Before the advent of silicone hydrogel materials, water content and thickness of soft contact lenses determined the oxygen transmissibility (Dk/t) of the lens, thinner higher water content lenses = higher Dk/t. Although high water content lenses have many advantages that includes; superior comfort, faster adaptation, longer wearing time, extended wear and easier handling due to greater thickness, they also have significant disadvantages which includes; shorter life span, more deposits, discoloration, less reproducibility, solution problems, dehydration and corneal desiccation. Lower water content lenses have fewer of these problems but may cause significant corneal oedema and neovascularisation due to the poor oxygen transmissibility of the lens material.

Soft lenses can be designed with single curve, bi-curve, blended multiple curve and aspheric back surface design. Aspheric designs have the advantage of better lens/cornea-peri-limbal fitting relationships, fewer base curve steps, fit less sensitive to diameter changes, increased lens movement and more uniform bearing pressure. Disadvantages of aspheric lenses includes, cost to manufacture as well as more movement and decentration. Although back surface peripheral curves are physiologically insignificant, changes in these curves (especially radial edge lift) affects the fit and lens movement significantly. The thickness of the lens edge is governed by durability considerations rather than comfort or physiology. However, thick edges can cause discomfort and thin edges tear easily. The front surface design of the lens is important for fit as well as on eye behaviour and is usually chosen to minimise the edge thickness of the lens, especially in high prescriptions. Common designs include bi-curves, multiple blended curves and continuous aspheric front surface curves. The front surface can also include a bifocal or multifocal component. Most modern

disposable lens designs are aspheric. Table 20 summarises the methods commonly used to manufacture soft lenses and their limitations.

Table 20: Soft lens methods of manufacture

Method	Limitations
Lathing	Simple designs only
Moulding-Anhydrous	Few, but anisotropic expansion on hydration changes lens shape
Moulding-Wet Stabilised	Almost none
Spin-Casting	Only simple back surface designs possible
Moulding & Lathing	Simple designs only
Spin-casting & Lathing	Simple designs only

Table 21: Soft lenses available in South Africa. Courtesy of John Stein (Optical assistant - SB Media)

Product	Material	Water content	Powers	Dk/t	Base curve/s	Diameter	Centre thickness	Visibility tint	Modality	Additional information
Alcon							•			
AIR OPTIX® AQUA	Lotrafilcon B	33%	+6.00D to -8.00D (0.25D steps) -8.50D to -10.00D (0.50D steps)	138	8.6	14.2mm	0.08 mm @ -3.00D		Daily wear & occassional overnight wear. Monthly replacement. FDA and CE approved for up to 6 nights extended wear	
AIR OPTIX® HYDRAGLYDE	Lotrafilcon B	33%	+6.00D to -8.00D (0.25D steps) -8.50D to -1200D and +6.50-+8.00 (0.50D steps)	138	8.6	14.2	0.08 mm @ -3.00D		Daily wear & occassional Monthly replacement. Up to 6 nights extended wear	
AIR OPTIX® AQUA EX	Lotrafilcon A	24%	+6.00D to -8.00D (0.25D steps) -8.50D to -10.00D (0.50D steps)	175	8.4, 8.6	13.8mm	0.08 mm @ -3.00D		Daily wear, monthly replacement	
AIR OPTIX <sup>®</sup> NIGHT & DAY <sup>™</sup> AQUA	Lotrafilcon A	24%	+6.00D to -8.00D (0.25D steps) -8.50D to -10.00D (0.50D steps)	175	8.4, 8.6	13.8mm	0.08 mm @ -3.00D		FDA & CE approved for up to 30 nights continuous wear Monthly replacement	
AIR OPTIX® NIGHT & DAY <sup>TM</sup> AQUA	Lotrafilcon A	24%	+6.00D to -8.00D (0.25D steps) -8.50D to -10.00D (0.50D steps)	175	8.4, 8.6	13.8mm	0.08 mm @ -3.00D		FDA & CE approved for up to 30 nights continuous wear Monthly replacement	
AIR OPTIX® for ASTIGMATISM	Lotrafilcon B	33%	+6.00D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps) AXIS: Full circle in 10° steps	108	8.7	14.5mm	0.102 mm @ -3.00D		Daily wear. Monthly replacement.	CYL: -0.75, -1.25, -1.75, -2.25
AIR OPTIX COLORS®	Lotrafilcon B	33%	Plano to +6.00D to -6.00D (0.25D steps); -6.00D to -8.00D (0.50D steps)	138	8.6	14.2mm	0.08mm @ - 3.00D		Occassional wear or daily wear Monthly Replacement.	
AIR OPTIX® AQUA Multifocal	Lotrafilcon B	33%	+6.00D to -10.00D (0.25D steps) Add Powers: LO, MED, HI	138	8.6	14.2mm	0.08 mm @ -3.00D		Daily wear or up to 6 nights extended wear. Monthly replacement	
DAILIES® AquaComfort Plus® (Sphere)	Nelfilcon A Hydroxypropyl methylcellulose (HPMC) Polyethylene glycol (PEG) Polyvinyl alcohol (PVA)	69%	+0.50D to +6.00D (0.25D steps) -0.50D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps)	26	8.7	14.0mm	0.10mm @ -3.00D	Light Blue VISITINT®	Daily wear & daily replacement	
DAILIES® AquaComfort Plus® (Sphere)	Nelfilcon A Hydroxypropyl methylcellulose (HPMC) Polyethylene glycol (PEG) Polyvinyl alcohol (PVA)	69%	+0.50D to +6.00D (0.25D steps) -0.50D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps)	26	8.7	14.0mm	0.10mm @ -3.00D	Light Blue VISITINT®	Daily wear & daily replacement	

Product	Material	Water content	Powers	Dk/t	Base curve/s	Diameter	Centre thickness	Visibility tint	Modality	Additional information
DAILIES* AquaComfort Plus® TORIC	Nelfilcon A Hydroxypropyl methylcellulose (HPMC) Polyethylene glycol (PEG) Polyvinyl alcohol (PVA)	69%	+4.000 to -6.000 (0.25D steps) -6.500 to -8.000 (0.500 steps) AXIS: 10°, 20°, 70°, 80°, 90°, 100°, 110°, 160°, 170°, 180°	26	8.8	14.4mm	0.10mm @ -3.00D	Light Blue VISITINT®	Daily wear & daily replacement	CYL: -0.75, -1.25, -1.75
DAILIES* AquaComfort Plus® TORIC	Nelfilcon A Hydroxypropyl methylcellulose (HPMC) Polyethylene glycol (PEG) Polyvinyl alcohol (PVA)	69%	+4.00D to -6.00D (0.25D steps) -6.50D to -8.00D (0.50D steps) AXIS: 10°, 20°, 70°, 80°, 90°, 100°, 110°, 160°, 170°, 180°	26	8.8	14.4mm	0.10mm @ -3.00D	Light Blue VISITINT®	Daily wear & daily replacement	CYL: -0.75, -1.25, -1.75
DAILIES® AquaComfort Plus® MULTIFOCAL	Nelfilcon A Hydroxypropyl methylcellulose (HPMC) Polyethylene glycol (PEG) Polyvinyl alcohol (PVA)	69%	+6.000 to -10.000 (0.25D steps) (Add Powers: LO up to +1.25; MED +1.50 to +2.00; HI +2.25 to +2.50)	26	8.7	14.0mm	0.10mm @ -3.00D	Light Blue VISITINT®	Daily wear & daily replacement	Add Powers: LO, MED, HI
DAILIES TOTAL 1*	Delifilcon A	Core: 33% Surface >80%	-0.50D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps)	156	8.5	14.1 mm	0.09mm @ - 3.00D	VISITINT*	Daily wear & daily replacement	
DAILIES TOTAL 1®	Delifilcon A	Core: 33% Surface >80%	-0.50D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps)	156	8.5	14.1 mm	0.09mm @ - 3.00D	VISITINT*	Daily wear & daily replacement	
DAILIES TOTAL 1® Multifocal	Delifilcon A	Core: 33% Surface >80%	-10.00 to +6.00 (0.25D steps) (Add Powers: LO up to +1.25; MED +1.50 to +2.00; HI +2.25 to +2.50)	156	8.5	14.1mm	0.10 mm @ - 3.00D	VISITINT*	Daily wear & daily replacement	
Freshlook® One-Day	Nelfilcon A	69%	Plano to -6.00D (excluding -0.25) (0.25D steps)	26	8.6	13.8mm	0.10mm @ -3.00D		Daily wear & daily replacement	ColorBlends Blue, Green, Pure Hazel, Gray
Freshlook® Illuminate	Nelfilcon A	69%	Plano to -6.00 ( 0.25 steps) -6.50 to -8.00 (0.50 steps)	26	8.6	13.8mm	0.10mm @ -3.00D		Daily wear & daily replacement	
Freshlook® Colors	Phemfilcon A	55%	pl to -6.00D (0.25 steps) -6.50 to-8.00 (0.50 steps) +0.25D to +2.00D (0.25D steps) +2.50D to +6.00D (0.50D steps)	20	8.6	14.5mm	0.08mm @ -3.00D		Occassional wear or Daily wear Monthly replacement.	Blue, Green, Hazel, Violet, Misty Gray, Sapphire Blue
Freshlook® ColorBlends	Phemfilcon A	55%	pl to -6.00D (0.25 steps) -6.50 to-8.00 (0.50 steps) +0.25D to +2.00D (0.25D steps) +2.50D to +6.00D (0.50D steps)	20	8.6	14.5mm	0.08mm @ -3.00D		Occassional wear or daily wear Monthly Replacement.	Gray, Blue, Green, Brown Honey, Pure Hazel, Turquoise, True Sapphire, Amethyst
Freshlook® Dimensions	Phemfilcon A	55%	Plano	20	8.6	14.5mm	0.08mm @ -3.00D		Occassional wear or Daily wear Monthly Replacement	Caribbean Aqua, Pacific Blue, Sea Green
Freshlook® Dimensions	Phemfilcon A	55%	-0.25 to -6.00D (0.25 steps) -6.50 to-8.00 (0.50 steps) +0.25D to +2.00D (0.25D steps) +2.50D to +6.00D (0.50D steps)	20	8.6	14.5mm	0.08mm @ -3.00D		Occassional wear or Daily wear Monthly Replacement	Caribbean Aqua, Pacific Blue, Sea Green

contd...

Product	Material	Water content	Powers	Dk/t	Base curve/s	Diameter	Centre thickness	Visibility tint	Modality	Additional information
Contact Lens Laboratory of S  Premio 2 week Toric (Silicone Hydrogel) - COMING SOON	Asmofilcon A	40%	Plano to -6.00 (0.25steps) -6.50 to -10.00 (0.50steps) Cyl: -0.75, -1.25, -1.75 Axis: 10º, 20º, 160º, 170º, 180º	161	8.6	14.00	0.08mm (-3.00D)	Light Blue	2 Weekly / up to 6 nights extended wear	Visiostable DesignTN at 3 & 9 o'clock prevents axis rotatior & improves centration
Premio 2 week Sphere (Silicone Hydrogel) - COMING SOON	Asmofilcon A	40%	Sphere -6.50 to -13.00 (0.50 steps) +6.00 to -6.50 (0.25 steps)	161	8.30 / 8.60	14.00	0.08mm (-3.00D)	Light Blue	up to 6 nights extended wear / 2 Weekly	
Miru 1 month - COMING SOON	Asmofilcon A	40%	Sphere -6.50 to -13.00 (0.50 steps) +6.00 to -6.50 (0.25 steps)	161	8.30 / 8.60	14.00	0.08mm (-3.00D)	Lavender	1 Month	
Miru 1 day - COMING SOON	Hioxifilcon A	57%	Sphere -0.50 to -6.00 (-0.25 steps) -6.50 to -10.00 (-0.50 steps)	19	8.6	14.20	0.10mm (-3.00D)	Light Blue	1 Day	
Miru 1 day - COMING SOON	Hioxifilcon A	57%	Sphere -0.50 to -6.00 (-0.25 steps) -6.50 to -10.00 (-0.50 steps)	19	8.6	14.20	0.10mm (-3.00D)	Light Blue	1 Day	
Kerasoft IC (Silicone Hydrogel 74%)	Filcon V3 Definitive 74% SiH	74%	Sphere +20.00 to -20.00 Cyl: -0.50 to -12.00 (0.25 steps) Any Axis	60	7.40 to 9.40	14.00 / 14.50 15.00 / 15.50			3 Monthly	Adjustable periphery
Kerasoft 3 (Silicone Hydrogel 74%)	Filcon V3 Definitive 74% SiH	74%	Sphere +30.00 to -30.00 Cyl: -0.50 to -11.00 (0.25 steps) Any Axis	60	8.00, 8.20 8.40, 8.60	14.00 / 14.50 15.00	0.07mm		3 Monthly	Multifocal Add up to +3.50DS
Creations Monthly	Methafilcon A	55%	Sphere +4.00 to -6.00 (0.25D steps)	19	8.7	14.40	@ -3.00D		Monthly	Iris Patterns
Adore Coloured 3 month Disposable	HEMA	38%	0.00 to - 5.00 (0.25 steps) -5.50 to -16.00 (0.50 steps) +0.50 to +5.00 (0.25 steps) +5.50 to +10.00 (0.50 steps)	15.05	8.6	14.00	0.08mm @ -3.00D		3 Month	Iris Patterns UV
Soflex Kristal Colour Disposable	Methaflicon A	55%	Plano to -6.00 (0.25D steps)	17	8.6	14.20	0.09 mm @ -3.00D		Monthly	Iris Patterns
Soflex Colour 4 Fun Cosmetic	HEMA	38%	Plano	9.7	8.6	14.00	0.07 mm @ -3.00D		6 Monthly	Fun Patterns & Colours
CLL Silicone Hydrogel	Definitive 74% SiH	74%	-50.00 to +50.00	60	Any	8.00 to 14.0	C 2		3 Month	Silicone Hydrogel FOR INFANTS
Sphere (INFANTS)  CLL Silicone Hydrogel	Or Definitive 65% Definitive 74% SiH	65% 74%	-50.00 to +50.00	60	Any	12.00 to 15.0			3 Month	Silicone Hydrogel
Sphere Soflex theraputic lens (Silicone Hydrogel) - For pediatric aphakic	Or Definitive 65%  Definitive 74% SiH  Or Definitive 65%	74% 65%	Sphere +8.00 to +40.00 (0.25D steps)		6.80, 7.00, 7.20, 7.40, 7.60	12.50. 13.00, 13.50, 14.00, 14.50	0.40mm @ +25.00D		3 Month	Silicone Hydrogel
Soflex Soft K (Silicone Hydrogel) - For Keratoconus	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +10.00 (0.25D steps)	60	7.00, 7.30, 7.60, 7.90, 8.20	14.20 14.80	0.36mm @ -3.00D		3 Month	Silicone Hydrogel Keratoconus DOT at 270°
Soflex Soft K Toric (Silicone Hydrogel) - For Keratoconus	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +10.00 (0.25D steps) Any Axis Cyl up to -7.00	60	7.00, 7.30, 7.60, 7.90, 8.20	14.20 14.80	0.36mm @ -3.00D		3 Month	Silicone Hydrogel Keratoconus DOT at 270°
Soflex Soft K RG (Silicone Hydrogel) - For Keratoconus	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +20.00 (0.25 steps)	60	7.00, 7.30, 7.60, 7.90, 8.20	14.20 14.80			3 Month	Silicone Hydrogel Keratoconus Reverse Geometry
Soflex Soft K Semi Scleral (Silicone Hydrogel) - For Keratoconus	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +20.00 (0.25 steps)	60	Steep Periphery 6.70, 7.00, 7.30, 7.60 & Regular Periphery 6.40, 6.70, 7.00, 7.30, 7.60	17.00	0.60mm @ -3.00D		3 Month	Silicone Hydrogel Aspheric
Soflex Soft K Toric Semi Scleral (Silicone Hydrogel) - For Keratoconus	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +20.00 (0.25D steps) Axis 1° to 180° (1° steps) Cyl -0.75 to -4.50	60	Steep Periphery 6.70, 7.00, 7.30, 7.60 & Regular Periphery 6.40, 6.70, 7.00, 7.30, 7.60	17.00	0.60mm @ -3.00D		3 Month	Silicone Hydrogel Front Toric Prism Ballast
Soflex Toric (Silicone Hydrogel)	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +20.00 (0.25D Steps) Any Axis & Cyl up to -15.00	60	8.10, 8.40, 8.70, 9.00, 9.30	13.50 14.50 15.00	0.15mm @ -3.00D		3 Month	Silicone Hydrogel Lenticular Prism Ballast
Soflex Sphere (Silicone Hydrogel)	Filcon V3 Definitive 74% SiH	7400%	Sphere -20.00 to +20.00 (0.25D steps)	60	7.80, 8.10, 8.30, 8.40, 8.70, 9.00, 9.30	13.50 14.00 14.50 15.00	0.14 mm @ -3.00D		3 Month	Silicone Hydrogel
Soflex Dispo Air Multifocal (Silicone Hydrogel)	Filcon II 3	58%	Sphere Plano to -6.00 (0.25D steps) -6.50 to -7.00 (0.50D steps) +0.25 to +6.00 (0.25D steps) Low Add +1.25 to +2.25 High Add +2.25 to +3.00	62	8.7	14.20	0.07mm @ -3.00D		Monthly	Multifocal Silicone Hydrogel
Soflex Dispo Bio (Silicone Hydrogel)	Comfilcon A	48%	Sphere -0.25 to -6.00 (0.25D steps) -6.50 to -12.00 (0.50D steps) +0.25 to +6.00 (0.25D steps) +6.50 to +8.00 (0.50D steps)	128	8.6	14.00	0.08mm @ -3.00D	Light Blue	Monthly	Silicone Hydrogel
Soflex Dispo Bio Toric (Silicone Hydrogel)	Comfilcon A	48%	Sphere Plano to -6.00 (0.250 steps) -6.50 to -10.00 (0.500 steps) +0.25 to +6.00 (0.250 steps) +6.50 to +8.00 (0.500 steps) Axis 10" to 180" (in 10" steps) Cyl -0.75, -1.25, -1.75, -2.25	128	8.7	14.20	0.11mm @ -3.00D	Light Blue	Monthly	Silicone Hydrogel Prism Ballast
Soflex Dispo Multifocal	Methafilcon A	55%	Sphere Plano to -5.00 (0.25D steps) -5.50 to -7.00 (0.50D steps) +0.25 to +5.00 (0.25D steps) +5.50 to +6.00 (0.50D steps) One Add for +1.25 to +2.25	18	8.7	14.20	0.14mm @ -3.00D	Light Blue	Monthly	Multifocal
CLL Dispo "Enhancing Colours" (Green / Blue / Aqua)	Methaflicon A	55%	(BC 8.60) -0.25 to -8.00 (0.25D steps) -8.50 to -10.00 (0.50D steps) (BC 8.90) -0.25 to -8.00 (0.25D steps) (BC 8.80) +0.25 to +8.00 (0.50DS steps)	27	8.6, 8.8, 8.9	14.40	0.07mm @ -3.00D	Blue Green Aqua	Monthly	Spheric Optional Enhancing Iris Tint: Blue, Aqua, Green
Soflex Dispo	Methaflicon A	55%	(BC 8.60) -0.25 to -8.00 (0.25D steps) -8.50 to -10.00 (0.50D steps) (BC 8.90) -0.25 to -8.00 (0.25D steps) (BC 8.80) +0.25 to +8.00 (0.50DS steps)	27	8.6, 8.8, 8.9	14.40	0.07mm @ -3.00D	Light Blue	Monthly	Spheric
Soflex Dispo Aspheric	Methaflicon A	55%	Sphere (BC 8.40) -0.25 to -8.00 (0.25DS steps) (BC 8.70) -0.25 to -8.00 (0.25DS steps) -8.50 to -10.00 (0.50DS steps) +0.25 to +8.00 (0.25DS steps)	27	8.7, 8.4	14.40	0.07mm @ -3.00D	Light Blue	Monthly	Spheric Back Aspheric Front
Soflex Dispo Pro	Omaflicon A	62%	Plano to -6.00 (0.25D steps) -6.50 to -20.00 (0.50D steps) +0.50 to +6.00 (0.25D steps) +6.50 to +20.00 (0.50D steps)	27	8.6	14.20	0.065mm @ -3.00D	Light Blue	Monthly	Spheric

Product	Material	Water	Powers	Dk/t	Base curve/s	Diameter	Centre	Visibility	Modality	Additional
Soflex Dispo Pro Toric		content		•	,		thickness	tint	,	information
			Sphere -0.50 to -6.00 (0.25D steps)							
Soflex Dispo Silk One Day	Vifilcon	59%	-6.50 to -10.00 (0.50D steps) +0.50 to +4.00 (0.25D steps) +4.50 to +6.00 (0.50D steps)	20	8.6	14.20	0.08mm @ -3.00D	Light Blue	1 day	UV
Soflex Dispo Silk Toric One Day	Methaflilcon A	55%	Sphere Plano & -0.50 to -6.00 (0.25b steps) -6.50 to -8.00 (0.50b steps) Axis 10, 20, 90, 160, 170, 180 Cyl -1.00 (for -0.75 to -1.25) & -1.75 (for -1.50 to -2.00)	20	8.7	14.50	0.08mm @ -3.00D	Light Blue	1 day	K Average 7.50 to 8.10 Lines at 0° and 180° UV
Soflex Dispo Toric	Methafilcon A	55%	Sphere -8.00 to +6.00 (0.25 steps) Axis 10° to 180° (in 10° steps) Cyl -0.75, -1.25,-1.75, -2.25	19	8.7	14.40	0.105mm @ -3.00D	Light Blue	Monthly	Prism ballast Laser mark at 6 o'clock
Soflex Eye Q Multifocal (Silicone Hydrogel)	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +10.00 (0.25D steps) LOW add up to +2.25 HIGH Add up to +2.75	60	8.10, 8.40, 8.70, 9.00, 9.30, 9.60	14.50	0.15mm @ -3.00D		3 Month	Multifocal Silicone Hydrogel
Soflex Toric Eye Q Multifocal (Silicone Hydrogel)	Filcon V3 Definitive 74% SiH	74%	Sphere -20.00 to +10.00 (0.25D steps) Any Axis & Cyl up to -6.00 LOW add up to +2.25 HIGH Add up to +2.75	60	8.10, 8.40, 8.70, 9.00, 9.30, 9.60	14.50	0.15mm @ -3.00D		3 Month	Multifocal Silicone Hydrogel Prism Ballast
Soflex Kristal Monthly	Methafilcon A	55%	-0.25 to -6.00 (0.25D steps) -6.50 to -12.00 (0.50D steps) +0.25 to +4.00 (0.25D steps) +4.50 to +8.00 (0.50D steps)	17	8.6	14.20	0.09mm @ -3.00D	Light Blue	Monthly	Spheric Back Aspheric Front
Soflex Trios Back Toric	Filicon II 2	58%	Sphere -10.00 to +6.00 (0.25 steps)  Axis 5° to 180° (5° steps)  Cyl -0.75 to -5.25 (0.50 steps)	32	8.40, 8.70, 9.00	14.50	0.15mm @ -3.00D		3 Month	Lenticular Prism Ballast Back Toric
Soflex Dispo Day by Day	Filicon II 2	58%	Sphere +0.25 to -6.50 (0.25D Steps) -7.00 to -12.00 (0.50D Steps) +0.50 to +6.00 (0.25D Steps) +6.50 to +8.00 (0.50D Steps)	30	8.6	14.20			1 Month	Correction of Ametropia
Crazy Lenses (Plano)	Hydrogel Terpolymer	45%	Plano		8.6	14.00			3 Month	Sphere Prism Ballast Thatrical designs
Eurotech										
Soleko QueenColor	Polymacon	38%	+/- 20.00 to +/- 6.00 (step 0.50) -6.00 to +6.00 (step 0.25)	9.0 ±2	8.6	14			Quarterly	Pearl, Yellow, Aqua, Light Blue, Light Green,
Soleko QueenColor Toric	Ocufilicon A	43%	-10.00 to +15.00 (step 0.25) Cyls: 0.75, 1.25, 2.00, 2.75, 3.50 Axis: (0° to 180°) 5° steps	13 ±2	8.6	14.2			Quarterly	Jade, Violet, Spice, Ocean, Blue, Dark Green, Amber,
Neovision clear	2-Hema	55%	0.00 to +10.00 0.00 to -10.00		8.6	14.2		Light Blue	Daily wear Monthly replacement	
Neovision Eyepia Clear	2-Hema	45%	0.00 to +10.00 0.00 to -10.00		8.6	14.2			Daily wear Monthly replacement	Blue, Grey, Green, Aqua, Violet, Hazel, Brown, Honey
JessenFashion	, ,		T						1	ı
Disophta Disposable Aqua Plus UV Daily Contact Lenses	Filcon IV1	55%	-0.500D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps) +0.50D to +5.00D (in 0.25D steps) +5.50D to +8.00D (0.50D steps)	18	8.7	14.1	0.12 @ - 3.00	Light blue	single use daily wear	UV class 1
Ezvue I-See Vision Monthly Disposable Contact Lenses	Filcon IV1	55%	-0.500D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps) +0.50D to +5.00D (in 0.25D steps) +5.50D to +8.00D (0.50D steps)	19.7	8.6	14.1	=0.11 @ - 3.00	light blue	Daily wear Monthly replacement	UV class 1

contd...

Drodust	Material	Water	Downer	Dk/t	Paga aurus la	Diameter	Centre	Visibility	Modelity	Additional
Product	- Iwateriai	content	Powers	DK/t	Base curve/s	Diameter	thickness	tint	Modality	information
CooperVision	I		+8.00D to 12.00D			l	l	l	1	I
Biofinity	Comfilcon A	48%	-0.25D to -6.00D (0.25D steps) -6.50D to -1200D (0.50D steps) +0.25D to +6.00D (0.25D steps) +6.50D to +8.00D (0.50D steps)	160	8.6	14.0	0.08mm	light blue	Flexible Wear Monthly replacement	Silicone Hydrogel Sphere Dk 128
Biofinity Sphere XR	Comfilcon A	48%	+8.50D to +15.00D (0.50D steps) -12.50D to -20.00D (0.50D steps)	160	8.6	14.0	0.08mm	light blue	Flexible Wear Monthly replacement	Silicone Hydrogel Sphere Dk 128
Avaira	Enfilcon A	46%	+8.00D to -12.00D -0.25D to -6.00D (0.25D steps) -6.50D to -12.00D (0.50D steps) +0.25D to +6.00D (0.25D) +6.50D to +8.00D (0.50D steps)	125	8.4 plus lenses 8.5 minus lenses	14.2	0.08mm	light blue	Daily wear monthly replacement	Silicone Hydrogel Sphere Dk 100
Avaira Vitality	Fanfilcon A	55%	+0.25D to +6.00D (0.25D steps) +6.00D to +8.00D (0.50D steps) -0.25D to -6.00D (0.25D steps) -6.00D to -12.00D (0.50D steps)	110	8.4	14.2	0.08mm	blue	Daily wear Monthly replacement	Silicone Hydrogel Sphere Dk
Proclear Compatibles	Omafilcon A	62%	+20.00D to -20.00D Plano to -6.00D (0.25D steps) -6.50D to -20.00D (0.50D steps) +0.25D to +6.00D (0.25D steps) +6.50Dto +20.00D (0.50D steps)	42	8.6	14.2	0.065mm	light blue	Daily wear Monthly replacement	+20.00D to -20.00D in a Monthly Disposable
Frequency XC	Omafilcon A	60%	+6.00D to 10.00D -0.25D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50D steps) +0.50D to +6.00D (0.25D steps)	33	8.5	14.2	0.075mm	light blue	Daily wear Monthly replacement	
Frequency Aspheric	Methafilcon A	55%	+8.00D to to -10.00D -0.25D to -8.00D (0.25D steps) -8.50D to -10.00D (0.50D steps) +0.25D to +8.00D (0.25D steps)	19	8.7	14.4	0.09mm	light blue	Daily wear Monthly replacement	
Biofinity Toric	Comfilcon A	48%	+8.00D to -10.00D +6.00D to -6.00D in 0.25D steps +6.50D to +8.00D in 0.50D steps -6.50D to -10.00D in 0.50D steps Cyls: -0.75D to -2.25D (0.50 steps) AXIS: 10° to 180° in 10° steps	116	8.7	14.5	0.11mm	light blue	Flexible wear monthly replacement	Silicone Hydrogel Toric Cyl powers: -0.75 -1.25 -1.75 -2.25
Biofinity Toric XR	Comfilcon A	48%	+10.00D to -10.00D +6.50D to +10.00D in 0.50D steps -6.50D to -10.00D in 0.50D steps Cyls: -0.75D to -5.75D (0.50 stepts) AXIS: 5 to 180 in 5 steps	116	8.7	14.5	0.11mm	light blue	Flexible wear monthly replacement	Silicone Hydrogel Toric Cyl powers: -2.75; -3.25; -3.75; -4.25; -4.75; -5.25; - 5.75
Avaira Vitality Toric	Fanfilcon A	55%	+8.00 to -10.00 +6.00 to -6.00 in 0.25 steps +6.50 to +8.00 in 0.50 steps -6.50 to -10.00 in 0.50 steps Cyls: -0.750 to -2.250 (0.50 steps) AXIS: 10 to 180 in 5 steps	110	8.5	14.5		light blue	Daily wear Monthly replacement	Silicone Hydrogel Sphere Dk
Proclear Toric	Methafilcon A	62%	+6.00D to -8.00D +6.00D to -6.00D(0.25 steps) -6.50D to -8.00D (0.50 steps) Cyls: -0.75D to -2.25D (0.500 steps) Axes: 10 to 180 in 10 steps	25	8.8	14.4	0.11 mm	light blue	Daily wear Monthly replacement	
Proclear Toric XR	Methafilcon A	62%	+10.00D to -10.00D +6.00D to -6.00D(0.25 steps) -6.50D to -10.00D (0.50 steps) Cyls: -2.75D to -5.75D (0.50D steps) Axes: 5 to 180 in 5 steps	23	8.8	14.4	0.11 mm	light Blue	Daily wear Monthly replacement	Extended Range up to -5.75DS in 5° steps
Frequency Xcel Toric	Methafilcon A	55%	+6.00D to -8.00D +6.00D to -6.00D (0.25 steps) -6.50D to -8.00D (0.50 steps) Cyls: -0.75D to -2.25D (0.50D steps) Axes:10° to 180° in 10° steps	16	8.7	14.4	0.105 mm	light Blue	Daily wear Monthly replacement	

Product	Material	Water content	Powers	Dk/t	Base curve/s	Diameter	Centre thickness	Visibility tint	Modality	Additional information
CooperVision  Frequency Xcel  Toric XR	Methafilcon A	55%	+6.00D to -8.00D +6.00D to -6.00D (0.25 steps) -6.50D to -8.00D (0.50 steps) Cyls: -2.75D to -3.75D (0.50D steps) Axes:5* to 180° in 5° steps	16	8.7	14.4	0.105 mm	light Blue	Daily wear Monthly replacement	Extended Range up to -3.75DS in 5° steps
Proclear 1 day	Omafilcon A	60%	+8.00D to -12.00D -0.25D to -6.00D (0.25D steps) -6.50 to -12.00D (0.50D steps) +0.25D to +6.00D (0.25D steps) +6.50D to +8.00D (0.50D steps)	28	8.7	14.2	0.09mm	light blue	Daily disposable	Daily disposable in Proclear material
Proclear 1 day	Omafilcon A	60%	+8.00D to -12.00D -0.25D to -6.00D (0.25D steps) -6.50 to -12.00D (0.50D steps) +0.25D to +6.00D (0.25D steps) +6.50D to +8.00D (0.50D steps)	28	8.7	14.2	0.09mm	light blue	Daily disposable	Daily disposable in Proclear material
MyDay	Stenfilcon A	54%	+6.00D to -10.00D (0.25 steps to -6.00D and 0.50 steps to - 10.00D 0.25Dsteps to +5.00D and 0.50 steps to +6.00D)	100	8.4	14.2	0.08mm	light blue	Daily disposable	Daily disposable Silicone Hydrogel Material
MyDay	Stenfilcon A	54%	+6.00D to -10.00D (0.25 steps to -6.00D and 0.50 steps to - 10.00D 0.25Dsteps to +5.00D and 0.50 steps to +6.00D)	100	8.4	14.2	0.08mm	light blue	Daily disposable	Daily disposable Silicone Hydrogel Material
Proclear 1 day Multifocal	Omafilcon A	60%	+6.00D to -10.00D -0.25D to -6.00D (0.25D steps) -6.00 to -10.00D (0.50D steps) +0.25D to +6.00D (0.25D steps)	28	8.7	14.2	0.09mm	light blue	Daily disposable	Daily disposable Multifocal in Proclear material
Biomedics 1 Day Toric	Ocufilcon D	55%	Plano to -10.00D -0.25D to -6.00D (0.25D steps) -6.00 to -10.00D (0.50D steps) Cyls: -0.75, -1.25, -1.75. Axes: 20°, 90°, 160°, 180° (1.75 Cyl: -7.50D to-10.00D In Axes 90° and 180° only)	17	8.7	14.5	0.11mm	light blue	Daily disposable	Daily disposable Toric
Clariti 1 Day Sphere	Somofilcon A	56%	-0.50D to -6.00D (0.25D steps) -6.50D to -10.00D (0.50 Steps) +0.50D to +6.00D (0.25 Steps) +6.50D to +8.00D (0.50 Steps)	86	8.6	14.1	0.07mm		Daily disposable with UVA & UVB	
Clariti 1 Day Toric	Somofilcon A	56%	plano to -9.00D (0.50D steps after -6.50D) Cyls: -0.75, -1.25 & -1.75 Axis: 10,20,60,70,80,90,100,110,120,160,170,1 80 +0.25 to +4.00 (0.25 steps) Cyls: -0.75,-1.25 & -1.75 Axis: 20,70,90,110,160 & 180 Plano to -9.00 (-0.50 steps after -6.50) Cyls: -2.25 Axis: 10,20,90,160,170 & 180	57	8.6	14.3	0.105mm		Daily disposable with UVA & UVB	
Clariti 1 Day Multifocal	Somofilcon A	56%	+5.00D to -6.00D (0.25D steps) Add: Low up to +2.25 High +2.25 to +3.00	86	8.6	14.1	0.07mm		Daily disposable with UVA & UVB	
Biofinity Multifocal	Comfilcon A	48%	+6.00D to -10.00D ADD: +1.00 to +2.50 (0.50D steps) in D & N	142	8.6	14	Varies	light blue	Flexible wear monthly replacement	Silicone Hydrogel Multifocal
Biofinity Multifocal XR	Comfilcon A	48%	Sphere: +15.00D to -20.00 D Add: +1.00D to +3.00D D & N (+3.00 only in N)	142	8.6	14	Varies	light blue	Flexible wear monthly replacement	Silicone Hydrogel Multifocal
Biofinity Multifocal Toric	Comfilcon A	48%	Sphere: +10.00D to -10.00 D Cyl: -0.75 to -5.75 (0.50 Steps) Axis: 5" to 180" (in 5" steps) Add: +1.00 to +2.50 D & N	142	8.6	14	Varies	light blue	Flexible wear monthly replacement	Silicone Hydrogel Multifocal
Proclear Multifocal	Omafilcon A	62%	+6.00D to -8.00D +6.00 to -6.00 (0.25 steps) -6.50 to -8.00 (0.50 steps) ADD: +1.00 to +2.50 (0.50D steps) in D & N	17	8.7	14.4	0.16 mm	light blue	Daily wear Monthly replacement	Monthly disposable Multifocal in Proclear material
Proclear Multifocal XR	Omafilcon A	62%	+20.000 TO -20.000 +6.00 to -6.00 (0.25D steps) +6.50 to -20.00 (0.50D steps) -6.50 to -20.00 (0.50 steps) ADD: +1.00 to +4.00 (0.50D steps) in D & N	Varies by Rx	8.7	14.4	0.16 mm	light blue	Daily wear Monthly replacement	Extended Range
Proclear Multifocal Toric	Omafilcon A	62%	+20.000 to -20.000 +6.50 to -6.50 (0.25 steps) +7.00 to +20.00 (0.50 steps) -7.00 to -20.00 (0.50 steps) Cyls: -075D to -5.75D (0.50D steps) ADD: +1.00D to +4.00D (0.50D steps) in D & N	Varies by Rx	8.4, 8.8	14.4	0.16 mm		Daily wear Monthly replacement	Monthly disposable Multifocal Toric in Proclear material
Proclear Multifocal Toric Trials	Omafilcon A	62%	+6.50 to +6.50 (0.25 steps) +7.00 to +20.00 (0.50 steps) -7.00 to -20.00 (0.50 steps)	Varies by Rx	8.4, 8.8	14.4	0.16 mm			Daily wear Monthly replacement
Expressions Colors (3 Pack)	Methafilcon A	55%	+4.00D to -6.00D	27	8.7	14.4	0.09 mm		Daily wear Monthly replacement	Hazel, Brown
Color Tones	Methafilcon A	55%	+4.00D to -6.00D	27	8.7	14.4	0.09 mm		Daily wear Monthly replacement	Dark Blue, Light blue, Aqua, Green , Grey, Hazel, Brown

Donada a de	Material	Water	D	DI-/A	D /-	Diameter.	Centre	Visibility	Bandalia.	Additional
Product	Material	content	Powers	Dk/t	Base curve/s	Diameter	thickness	tint	Modality	information
Johnson & Johnson	C		0.5000 to . 0.000 (0.350 store)			1	ı	1	ı	
ACUVUE® OASYS® with HYDRACLEAR® Plus	Senofilcon A Silicone Hydrogel with Internal Wetting Agent	38%	-0.500D to -6.00D (0.25D steps) -6.50D to -12.00D (0.50D steps) +0.50D to +6.00D (in 0.25D steps) +6.50D to +8.00D (0.50D steps)	147	8.4, 8.8	14	0.07mm @ -3.00D	Light Blue	2 weeks Daily Wear 1 week extended wear	UV class I
ACUVUE® OASYS® for ASTIGMATISM	Senofilcon A Silicone Hydrogel with Internal Wetting Agent	38%	Plano to -6000 in 0.250 steps     Cyls: -0.75, -1.25, -1.75     Axis: 10 to 180, 10 degrees steps     Cyl: -2.25 Axis: 90 & 180 (±20)         in 10 degree steps     -6.500 to -9.000 in 0.500 steps         Cyls: -0.75, -1.25, -1.75     Axis: 10 to 180, 10 degrees steps     Cyl: -2.25 Axis: 10, 20, 90, 160, 170, 180     +0.250 to +6.000 in 0.250 steps     Cyls: -0.75, -1.25, 1.75     Axis: 90 & 180 (±20)     in 10 degree steps     Cyl: -2.25 Axis: 10, 20, 90, 160, 170, 180	129	8.6	14.5	0.08mm @ -3.00D	Light Blue	2 weeks Daily Wear 1 week extended wear	UV class I
1 · DAY ACUVUE® MOIST Brand MULTIFOCAL Contact Lenses	Etafilcon A hydrogel lens with Internal Wetting Agent	58%	Sperical Power -9.00D to +6.00D (in 0.25D steps) Adds: +1.25D (LOW), +1.75 (MID), +2.50 (HGH)	25.5	8.5	14.3	0.084mm @ -3.00D	Light Blue	Single Use Daily Wear	UV class II
1 · DAY ACUVUE® MOIST Brand MULTIFOCAL Contact Lenses	Etafilcon A hydrogel lens with Internal Wetting Agent	58%	Sperical Power-9.00D to +6.00D (in 0.25D steps) Adds: +1.25D (LOW), +1.75 (MID), +2.50 (HGH)	25.5	8.5	14.3	0.084mm @ -3.00D	Light Blue	Single Use Daily Wear	UV class II
ACUVUE OASYS® Brand Contact Lenses with HydraLuxe™	Senofilcon A Silicone Hydrogel with Internal Wetting Agent	38%	-0.500D to -6.00D (0.25D steps) -6.50D to -12.00D (0.50D steps) +0.50D to +6.00D (in 0.25D steps) +6.50D to +8.00D (0.50D steps)	121	8.5, 9.0	14.3	0.085mm @ -3.00D	Light Blue	Single Use Daily Wear	UV class I
ACUVUE OASYS® Brand Contact Lenses with HydraLuxe™	Senofilcon A Silicone Hydrogel with Internal Wetting Agent	38%	-0.500D to -6.00D (0.25D steps) -6.50D to -12.00D (0.50D steps) +0.50D to +6.00D (in 0.25D steps) +6.50D to +8.00D (0.50D steps)	121	8.5, 9.0	14.3	0.085mm @ -3.00D	Light Blue	Single Use Daily Wear	UV class I
1 · DAY ACUVUE® TruEye®	Narafilcon A Daily disposable Silicone hydrogel	46%	-0.50 to -6.00 (0.25 steps) -6.50 to -12.00 (0.50 steps) +0.50 to +6.00 (0.25 steps)	118	8.5, 9.0	14.2	0.085mm @-3.00D	Light Blue	Single Use Daily Wear	UV class I
1 · DAY ACUVUE® MOIST®	Etafilcon A hydrogel lens with Internal Wetting Agent	58%	-0.50 to -6.00 (0.25 steps) -6.50 to -12.00 (0.50 steps) +0.50 to +6.00 (0.25 steps)	25.5	8.5, 9.0	14.2	0.084mm @ -3.00D	Light Blue	Single Use Daily Wear	UV class II
1 · DAY ACUVUE® MOIST®	Etafilcon A hydrogel lens with Internal Wetting Agent	58%	-0.50 to -6.00 (0.25 steps) -6.50 to -12.00 (0.50 steps) +0.50 to +6.00 (0.25 steps)	25.5	8.5, 9.0	14.2	0.084mm @ -3.00D	Light Blue	Single Use Daily Wear	UV class II
1 · DAY ACUVUE® MOIST® for ASTIGMATISM	Etafilcon A hydrogel lens with Internal Wetting Agent	58%	Plano to -6000 in 0.250 steps	25.5	8.5	14.5	0.09mm @ -3.00D	Light Blue	Single Use Daily Wear	UV class II
ACUVUE® 2	Etafilcon A	58%	-0.50D to -6.00D (0.25D steps) -6.50D to -12.00D ( 0.50D steps) +0.50D to +6.00D (0.25D steps) +6.50D to +8.00D (0.50D steps)	25.5	8.3, 8.7	14.0	0.084mm @ -3.00D	Light Blue	2 Week Daily Wear	UV class II

		Water					Centre	Visibility		Additional
Product	Material	content	Powers	Dk/t	Base curve/s	Diameter	thickness	tint	Modality	information
Bausch & Lomb										
Soflens 59	Hilafilcon B	59%	+6.00 to -9.00	22	8.6 equivalent	14.2mm	0.14mm	light blue	monthly	
Soflens 38	Polymacon	39%	+4.00 to -9.00	24.3	8.4 / 8.7 / 9.0	14.0mm	0.035mm	light blue	monthly	
Soflens Toric	Alphafilcon A	66%	+6.00 to -9.00 Axis 10 to 180 around the clock	16	8.5 equivalent	14.5mm	0.195mm	light blue	monthly	Cyl powers: -0.75, -1.25, -1.75, - 2.25 -2.75 in - only
Soflens Colours	Polymacon	39%	Plano to -6.00 in -0.50 steps	14	8.7	14.0mm	0.06mm	colour	monthly	Colours: Dark Hazel, Platinum, Topaz Pacific, Amazon, Aquamarine Emerald, India Indigo, Jade
Soflens Multi-Focal	Polymacon B	38%	+6.00 to -7.00 Low Add High Add	8.4	8.5 / 8.8	14.5mm	0.10mm	light blue	monthly	Matched Centre- Near Design
PureVision	Balafilcon A	36%	+6.00 to -12.00	110	8.6 / 8.3 *	14.0mm	0.09mm	light blue	monthly/flexiwear	* 8.3: plano to -6.00
PureVision 2HD	Balafilcon A	36%	+6.00 to -12.00	130	8.6	14.0mm	0.07mm	light blue	monthly/flexiwear	Freeform HD Optics
PureVision 2HD for Astigmatism	Balafilcon A	36%	+6.00 to -9.00 Axis 10 to 180 around the clock	90	8.9	14.5	0.05 to 0.5	light blue	monthly/flexiwear	Freeform HD Optics in cyl meridian -0.75, -1.25, -1.75, - 2.25
PureVision 2 for Presbyopia		36%	+6.00 to -10.00 (in 0.25 steps) Add powers: Low / High	130	8.6	14	0.07	light blue	monthly/flexiwear	Centre-near aspheric optics
PureVision Toric	Balafilcon A	36%	+6.00 to -9.00 Axis 10 to 180 around the clock	91	8.7	14.0mm	0.10mm	light blue	monthly/flexiwear	Cyl powers: -0.75, -1.25, -1.75, - 2.25
PureVision Multi-Focal	Balafilcon A	36%	+6.00 to -10.00 Low Add High Add	112	8.6	14.00mm	0.09mm	light blue	monthly/flexiwear	Matched Centre- Near Design
Soflens Daily Disposable SDD	Hilafilcon B	59%	+6.00 to -9.00	24	8.6	14.2mm	0.09mm	light blue	daily	UV Class II
Soflens Daily Disposable SDD	Hilafilcon B	59%	+6.00 to -9.00	24	8.6	14.2mm	0.09mm	light blue	daily	UV Class II
SDD for Astigmatism	Hilafilcon B	59%	Plano to-9.00 Axis: 20, 90 160, 180	22	8.6 equivalent	14.2mm	0.125mm	light blue	daily	UV Class II Cyl powers: -0.75, -1.25, -1.75
Biotrue ONEday*	Nesofilcon A	78%	-0.25D to -6.25D (0.25D steps) -6.50Dto -9.00D (0.50D steps) Powers up to +3.00D (in 0.25D steps)	42	8.6	14.2	0.1	light blue	daily	UV protection
Biotrue ONEday*	Nesofilcon A	78%	-0.25D to -6.25D (0.25D steps) -6.50Dto -9.00D (0.50D steps) Powers up to +3.00D (in 0.25D steps)	42	8.6	14.2	0.1	light blue	daily	UV protection
Biotrue ONEday* for Presbyopia	Nesofilcon A	78%	+3.00 D to -6.00D (0.25D steps) including plano Add power: One-add design	42	8.6	14.2	0.1	light blue	daily	UV protection
Ultra	Samfilcon A	46%	+6.00D to -12.00D in 0.50D steps above -6.00D	163	8.5	14.2	0.07	light blue	monthly	Freeform HD Optics