

IQ EYE

INDIVIDUALITY
IS
UNIQUE

IQ EYE

Silicone Hydrogel Lenses



DAVID THOMAS

"an eye for excellence"



IQ EYE SILICONE HYDROGEL LENSES FEATURING IPA TECHNOLOGY

IQ EYE contact lenses are the latest made to order and the only mid water content custom made silicone hydrogel material contact lenses currently available in the world.

IQ EYE Eye lenses are available in a wide range of parameters and lens designs to allow you to fit the majority of your patients with a silicone hydrogel material providing you flexibility to offer total patient satisfaction.

IQ EYE lenses are recommended for daily wear and can be supplied in spherical, toric and multifocal designs. For the hospital optometrist we can supply the lens for paediatric, aphakic and therapeutic cases.

INDIVIDUALITY IS UNIQUE

Cast moulded silicone hydrogel lenses provide high oxygen permeable contact lenses for the majority of patients. However, there are a large number of potential wearers, those that are high myopes or hyperopes, those with moderate degrees of corneal astigmatism and those that require other special lens designs that are unable to experience the benefits of silicone hydrogel lenses.

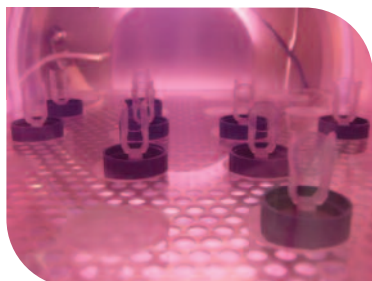
IQ EYE MATERIAL PROPERTIES

A balance of water content, modulus and oxygen permeability is important to provide a lens that delivers on comfort, handling, corneal integrity and is free of mechanical issues linked with some silicone hydrogel materials. IQ Eye lenses have been designed to eliminate these problems and allows us to manufacture a variety of lens designs accurately and with confidence. The proprietary cross linked silicone hydrogel polymer has been specially developed for use on our high precision lathing systems. IQ Eye Silicone Hydrogel Lenses have a UV blocker and plasma activated surface to give your patients protection from harmful UV light rays and maximum prevention against lipid deposition. These material properties ensure that your patients receive comfortable lenses with clear crisp vision all day and every day.

Material Properties	IQ Eye (lathe cut)	Acuvue Oasys (moulded)	Hydro Wave Ultravision (lathe cut)	Air Optix Individual (lathe cut)
Material	Filcon A II 3	Senofilcon A I 3	Filcon V3	Sifilcon A I 3
Water Content	54%	38%	74%	32%
Wetting Angle (Sessile Drop)	60°	101° ₁	90°	Not known
Oxygen Permeability (Dk)	55	103	60	82
Oxygen Transmissibility (Dk/t 0.07mm CT @ -3.00)	75.7	147	71.2 to 75 (CT 0.08mm)	117
Tensile Modulus MPa	0.55	0.72	0.39 ₂	1.1
Surface Treatment or Wetting Agent	Plasma coating	Internal wetting agent	None	Plasma coating
UV Blocker	Yes	Yes	No	No
Handling tint	Yes	Yes	No	Yes
Modality	3/12 or 12/12	2/52	3/12	3/12

References: 1. Lyndon Jones, Lakshman Subbaraman, Ronan Rogers, Kathy Dumbleton; Surface treatment, wetting & modulus of silicone hydrogels. Optician 2006;232:28-34
2. Dr. Richard Young, Dr. Tristan Tapper; A new silicone hydrogel for custom lens manufacture. Global Contact 2008, 49:30-33

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Our Plasma Process

We have developed a unique and proprietary plasma process for our silicone hydrogel material. Our process is called IPA – Intelligent Plasma Activation.

IPA produces high energy oxygen plasma consisting of oxygen ions, atoms and free radicals. When these reactive particles collide with the silicone hydrogel material surface a plasma oxidation reaction occurs. The oxygen particles on the material surface contribute to making the molecular components of the surface more receptive. This highly reactive surface will react with anything it comes into contact with. The silicone hydrogel material first comes into contact with water and this produces a surface of hydrophilic oxygen containing groups like (-OH), and thereby increasing wettability of the natural hydrophobic silicone containing material.

IQ Eye Applications

IQ Eye silicone hydrogel lenses are now available for most patients requiring demanding vision correction, allowing them to experience all day comfort and corneal health no matter what their prescription is.

- High Myopic
- Astigmatism
- Presbyopic
- Aphakic
- Paediatric
- Therapeutic

Benefits of Plasma Treatment

Activation

- Plasma surface activation involves the creation of surface chemical functional groups through the use of oxygen gas
- Surface activation involves the replacement of surface polymer groups with chemical groups from the plasma gas
- The plasma breaks down weak surface bonds in the polymer and replaces them with highly reactive hydroxyl groups
- Such activation alters the chemical activity and characteristics of the surface giving an enhanced and permanent wettability to the silicone hydrogel biomaterial

Surface Interaction

- Plasma treatment only affects sub micron levels of the silicone hydrogel biomaterial; it does not change the bulk properties
- Plasma cleaning leaves no organic residue, achieves complete contamination removal, resulting in an 'atomically clean' surface
- Plasma treatment occurs at near ambient temperature so giving minimal risk to the silicone hydrogel biomaterial damage

FITTING GUIDELINES FOR IQ EYE SILICONE HYDROGEL LENSES

Empirical Fitting Recommendations

Lenses can be calculated by providing the following information:

1. Keratometry readings
2. Spectacle prescription and BVD (back vertex distance if appropriate)
3. HVID (Horizontal Visible Iris Diameter)

As a rule a good starting point is to select the base curve 0.60mm flatter than the mean K reading. For HVID < 11.25mm select a diameter of 13.00mm. For HVID 11.25 to 12.00mm select a diameter of 14.00mm. For HVID > 12.00mm then select a diameter of 14.50-15.00mm.

Fit Assessment

OPTIMUM FITTING LENS

Indications:

- Good centration and full corneal coverage
- 0.25-0.50mm vertical movement with the blink
- Up to 1.00mm on upward gaze or lateral movement
- Good visual acuity

TIGHT FITTING LENS

Indications:

- Centration can appear good although decentration may occur
- Lack of movement on blink or upward and lateral gaze
- Initial comfort good but visual acuity poor
- Refit with flatter radius or smaller diameter

LOOSE FITTING LENS

Indications:

- Poor centration
- > 1.00mm movement on blink and > 2.00mm movement in upward and lateral gaze
- Poor lens comfort caused by lid sensation or lens fluting
- Variable visual acuity
- Refit with steeper radius or large diameter

For Astigmatic patients see our Assure Rx fitting guidelines.

IQ Eye Silicone Hydrogel Care Regime

For storing, cleaning and disinfection of IQ Eye Silicone Hydrogel lenses, we recommend MeniCare™ Soft multipurpose solution. Featuring Comfortec™, the innovative formulation of MeniCare™ Soft that makes it ideal for the optimum care of your lenses. Other proprietary multipurpose lens care solutions are compatible with IQ Eye Silicone Hydrogel lenses.

