

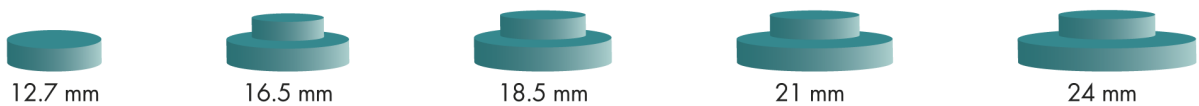
RGP

You can select from a comprehensive range of rigid gas permeable contact lens materials which will suit the needs of most contact lens manufacturers. The materials have a wide range of oxygen permeability levels and a large variety of colours.

All RGP materials from Vista are available in scleral blanks with bespoke diameters and stepped blanks available.

Vista Optics button trimming capability is such that we can tailor the blank size to your exact needs.

Our standard sizes are:



▪ The ultimate range of RGP materials: Evolution and BioGP

Why do competitors' materials require surface post treatment?

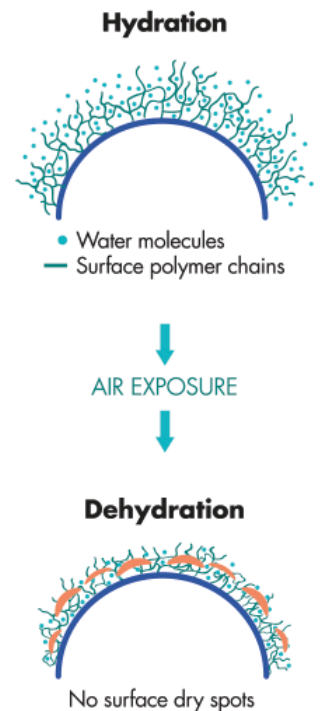
Plasma treatment increases surface oxygenation and hence wettability. However, due to molecular reorganisation, the surface oxygenation degrades over time

Plasma treated lenses lose their wettability within the lifetime of normal wear. Post treatment with hydrophilic polymers also becomes ineffective over normal wearing time.

Why do Vista materials not require surface post treatment?

Vista's RGP materials incorporate a built-in copolymerised hydrophilic polymer, which binds water above the surface of the lens. The hydrophilic surface is permanent and regenerates automatically in the event of re-polishing.

Vista's RGP materials automatically generate a hydrophilic surface even at the highest Dk values.





▪ BioGP - A ground breaking RGP material

A revolutionary material like no other, with its Biomimetic Liquid Surface providing ultimate on-eye comfort, wettability (without surface treatment) and deposit resistance.

A BIOMIMETIC HYDROPHILIC POLYMERIC SURFACE

The hydrophilic polymer is part of the material matrix and is regenerated after re-polishing (unlike plasma treatment).

The ONLY RGP material available which combines:

- Best in class stability
- High Dk for corneal health
- Ability to inhibit spoliation (mainly the build-up of protein deposits)

Indicated for:

- Patients with sensitivity to traditional RGP lenses
- Patients experiencing higher protein deposition
- Where higher power prescriptions are required
- Keratoconus therapy
- Corrective eye shaping (ORTHO - K)

	BioGP 100
Classification	Focon III 4
Description	Fluoro Silicone Acrylate with liquid hydrophilic surface
Oxygen Permeability (ISO)	100
Wetting Angle GBX Digidrop MCAAT - Using distilled water	53° (cf. 82°C for Boston XO)
Hardness (minimum)	73
Refractive Index	1.4553 ± 0.003
Tints	Clear / Euro Green / Euro Blue
UV Blocker	On request*
Cutting Speed	7000-9000 RPM
Polishing Speed	3500 RPM
Blank Overall Size (mm)	12.70 ± 0.04
Blank Thickness (mm)	5.00 ± 0.05
Special Specifications (Scleral)	On request

* MOQ applies



▪ EVOLUTION - OUR PREMIUM RANGE OF RGP MATERIALS

Super Wettable Biometric Fluoro Silicone Acrylate.

A new level of wettability and biocompatibility. Evolution is the culmination of many years of multicenter and multidisciplinary research and development which has delivered an RGP material with unsurpassed comfort, wettability and deposit resistance.

A material with an enhanced hydrophilic surface, Evolution is a truly high performance range of materials with great stability enabling predictable product results even at higher Dk values.

- Superior comfort and performance for demanding patients
- High production yields even from the higher Dk values
- These blanks are also available in Scleral sizes.

Material	Evolution 25	Evolution 65	Evolution 100	Evolution 125
Classification	Focon III 2	Focon III 4	Focon III 4	Focon III 5
Description	Fluoro Silicone Acrylate with hydrophilic surface	Fluoro Silicone Acrylate with hydrophilic surface	Fluoro Silicone Acrylate with hydrophilic surface	Fluoro Silicone Acrylate with hydrophilic surface
Oxygen Permeability (ISO)	25	65	100	125
Wetting Angle	< 10 ⁰	< 10 ⁰	< 10 ⁰	< 10 ⁰
Hardness (minimum)	78	73	73	73
Refractive Index	1.4731 ± 0.003	1.4614 ± 0.003	1.4536 ± 0.003	1.4514 ± 0.003
Tints	Clear / Euro Green / Euro Blue	Clear / Euro Green / Euro Blue	Clear / Euro Green / Euro Blue	Clear / Euro Green / Euro Blue
UV Blocker	On request*	On request*	On request*	On request*
Cutting Speed	7000-9000 RPM	7000-9000 RPM	7000-9000 RPM	7000-9000 RPM
Polishing Speed	3500 RPM	3500 RPM	3500 RPM	3500 RPM
Blank Overall Size (mm)	12.70 ± 0.04	12.70 ± 0.04	12.70 ± 0.04	12.70 ± 0.04
Blank Thickness (mm)	5.00 ± 0.05	5.00 ± 0.05	5.00 ± 0.05	5.00 ± 0.05
Special Specifications (Scleral)	On request	On request	On request	On request

* MOQ applies



▪ AddVALUE Fluoro Silicone Acrylate

AddVALUE fluoro silicone acrylate RGP materials have the same consistency and reliability as the silicone acrylate range while delivering enhanced wettability. Their excellent machining properties provides predictable results and high yields.

They are available in the standard Euro Blue, Euro Green and Grey and a few other special colours and UV blocking upon request.

▪ HiRI

As part of FSA family, HiRI stands in its own right. This material exhibits a higher refractive index allowing the manufacture of thinner lenses providing enhanced patient comfort and higher DK/t.

Material	add VALUE 25	HiRI	add VALUE 50	add VALUE 75	add VALUE 100
Classification	Focon III 2	Focon III 2	Focon III 3	Focon III 4	Focon III 4
Description	Fluoro Silicone Acrylate	Fluoro Silicone Acrylate	Fluoro Silicone Acrylate	Fluoro Silicone Acrylate	Fluoro Silicone Acrylate
Oxygen Permeability (ISO)	25	50	50	75	100
Wetting Angle	< 23°	< 25°	< 25°	< 27°	< 30°
Hardness (minimum)	79	73	73	73	73
Refractive Index	1.4730 ± 0.003	1.5048 ± 0.003	1.4670 ± 0.003	1.4614 ± 0.003	1.4534 ± 0.003
Tints	Blue / Clear / Grey / Green	Euro Blue	Blue / Clear / Grey / Green	Blue / Clear / Grey / Green	Blue / Clear / Grey / Green
UV Blocker	On request*	On request*	On request*	On request*	On request*
Cutting Speed	7000-9000 RPM	7000-9000 RPM	7000-9000 RPM	7000-9000 RPM	7000-9000 RPM
Polishing Speed	3500 RPM	3500 RPM	3500 RPM	3500 RPM	3500 RPM
Blank Overall Size (mm)	12.70 ± 0.04	12.70 ± 0.04	12.70 ± 0.04	12.70 ± 0.04	12.70 ± 0.04
Blank Thickness (mm)	5.00 ± 0.05	5.00 ± 0.05	5.00 ± 0.05	5.00 ± 0.05	5.00 ± 0.05

* MOQ applies



▪ AddVALUE Silicone Acrylate

AddVALUE silicone acrylate RGP materials are consistent and reliable.

They are lower oxygen permeability materials but remain extremely popular because they are easy to machine and handle and can be used for any lens design no matter how complex.

They are available in the standard Euro Blue, Euro Green and Grey and a few other special colours and UV blocking upon request.

Material	add VALUE 18	add VALUE 35
Classification	Focon II 2	Focon II 3
Description	Silicone Acrylate	Silicone Acrylate
Oxygen Permeability (ISO)	18	35
Wetting Angle	< 25°	< 30°
Hardness (minimum)	79	79
Refractive Index	1.4762 ± 0.003	1.4742 ± 0.003
Tints	Blue / Clear/ Grey/Green	Blue / Clear/ Grey/Green
UV Blocker	On request*	On request*
Cutting Speed	7000-9000 RPM	7000-9000 RPM
Polishing Speed	3500 RPM	3500 RPM
Blank Overall Size (mm)	12.70 ± 0.04	12.70 ± 0.04
Blank Thickness (mm)	5.00 ± 0.05	5.00 ± 0.05

* MOQ applies



HYDROPHILIC

With an extensive range of hydrophilic soft contact lens materials available you can choose from a full range of formulations that have been offered over the last decade. This gives you access to a generation of hydrophilic soft contact lens materials that give ultimate comfort and eye health as well as superb performance in your manufacturing laboratory.

▪ ADVANTAGE+

Advantage+ is a newly re-engineered range of GMA materials which Vista Optics has developed and further improved with feedback from one of the largest independent European contact lens manufacturers.

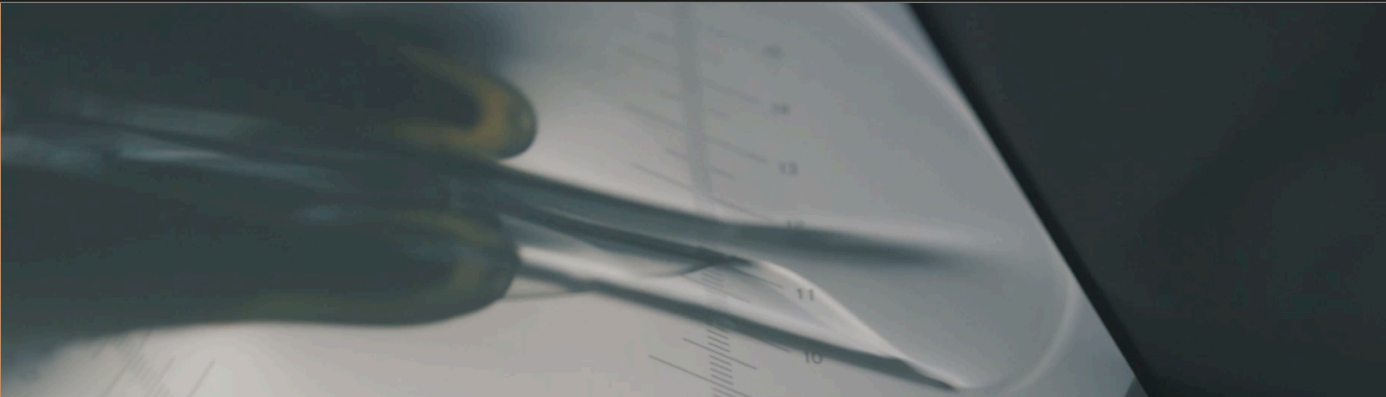
Advantage+ has high water retention as it dehydrates slowly during wear, making the lenses extremely comfortable and suitable for longer wearing schedules.

The tensile strength, elongation properties and consistent manufacturing performance of the Vista GMA material also ensures a low reject rate during manufacture.

These materials are available in Blue and Clear colours and optionally with UV blocking.

Material	ADVANTAGE+ 49	ADVANTAGE+ 59
Co-polymer of HEMA & GMA British Approved Name	Co-polymer of HEMA & GMA Filcon I 1	Co-polymer of HEMA & GMA Filcon II 1
Water Content %	49% ± 2	59% ± 2
Dk (Fatt)	18	27
Tint and UV Options	Blue, Blue UV & Clear	Blue, Blue UV and Clear
Expansion Ratio (Radial)	1,267	1,3764
Expansion Ratio (Diametric)	1,29	1,3914
Refractive Index (Wet)	1,4149	1,3987
Refractive Index (Dry)	1,5147	1,5155
Light Transmission	>97%	>97%
Elongation to Break	200%	150%
Roundness	Within 0.02mm	Within 0.02mm
Diameter	12.72mm ± 0.02mm	12.72mm ± 0.02mm
Thickness	5.00mm ± 0.05mm	5.00mm ± 0.05mm
Cytotoxicity	Non Toxic	Non Toxic
Biocompatibility	Biocompatible	Biocompatible

* MOQ applies



▪ VSO NVP/MMA

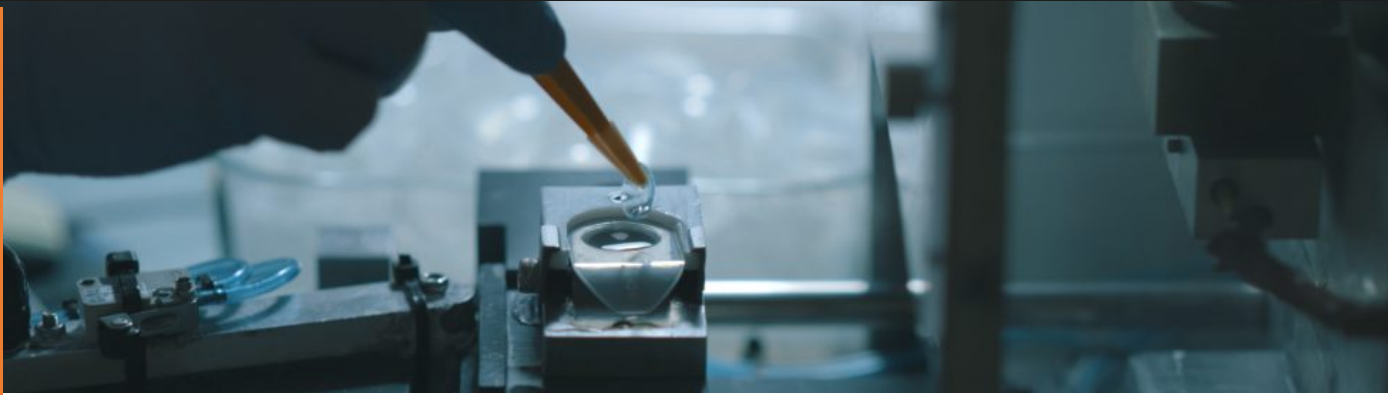
It is particularly difficult in the current market to secure a reliable supply of nVP/MMA materials as it is seen as an old fashioned material. However the lenses made meet a very desirable niche market and still have a place in the market.

The significant investment made in the manufacturing infrastructure at Vista in recent years has enabled this product group to improve as constantly as all the others and we offer a full range of water contents to meet the needs of these niche markets.

These materials are available in Blue and Clear colours and optionally with UV blocking.

Material	VSO 68	VSO 75
British Approved Name	Co-polymer of VP & MMA Filcon II 2	Co-polymer of VP & MMA Filcon II 2
Water Content %	68.1 ± 2	72.0 ± 2
Average measured Dk (Fatt)	30	43
Colours Available	Clear, Blue & Green	Clear, Blue & Green
UV Blocker	On request*	On request*
Expansion Ratio Radial	1.47 ± 0.04	1.52 ± 0.04
Expansion Ratio Diametric	1.47 ± 0.04	1.55 ± 0.04
Refractive Index Wet	1.3914 ± 0.002	1.3838 ± 0.005
Refractive Index Dry	1.5293 ± 0.003	1.5251 ± 0.005
Light Transmission	>97%	>97%
Roundness	Within 0.02mm	Within 0.02mm
Diameter	12.70mm ± 0.04mm	12.70mm ± 0.04mm
Thickness	5.00mm ± 0.05mm	5.00mm ± 0.05mm

* MOQ applies



▪ VSO pHEMA

pHema is the original soft contact material which is a popular today as it has always been. Of course, it has benefited from improved production techniques and you can now purchase pHema in large batch sizes with excellent results for contact lens manufacturers. You can also be assured that Vista Optics know the material inside out as we have been producing high quality pHema contact lens blanks since our operations started in 1979.

These materials are available in Blue and Clear colours and optionally with UV blocking.

Still very wide spread ionic hydrophilic material with 55% Water content which delivers excellent visual acuity and stability. Tried and tested, this newly engineered material provides high yields consistently.

Material	VSO 38	VSO 42	VSO 49	VSO 60
British Approved Name	pHEMA Filcon I 1	Co-polymer of HEMA & VP Filcon I 1	Co-polymer of HEMA & DMAA Filcon I 1	Co-polymer of HEMA & VP Filcon II 1
Water Content %	38.4 ± 2	42.1 ± 2	50.3 ± 2	57.2 ± 2
Average measured Dk (Fatt)	9	12	18	21
Colours Available	Clear, Blue & Green	Clear, Blue & Green	Clear & Blue	Clear & Blue
UV Blocker	On request*	On request*	On request*	On request*
Expansion Ratio Radial	1.16 ± 0.03	1.19 ± 0.03	1.25 ± 0.03	1.36 ± 0.04
Expansion Ratio Diametric	1.21 ± 0.02	1.22 ± 0.03	1.27 ± 0.03	1.35 ± 0.03
Refractive Index Wet	1.4349 ± 0.003	1.4311 ± 0.005	1.4169 ± 0.003	1.4026 ± 0.003
Refractive Index Dry	1.5180 ± 0.004	1.5187 ± 0.01	1.5142 ± 0.004	1.5266 ± 0.005
Light Transmission	>97%	>97%	>95%	>97%
Roundness	Within 0.02mm	Within 0.02mm	Within 0.02mm	Within 0.02mm
Diameter	12.70mm ± 0.04mm	12.70mm ± 0.04mm	12.70mm ± 0.04mm	12.70mm ± 0.04mm
Thickness	5.00mm ± 0.05mm	5.00mm ± 0.05mm	5.00mm ± 0.05mm	5.00mm ± 0.05mm

* MOQ applies

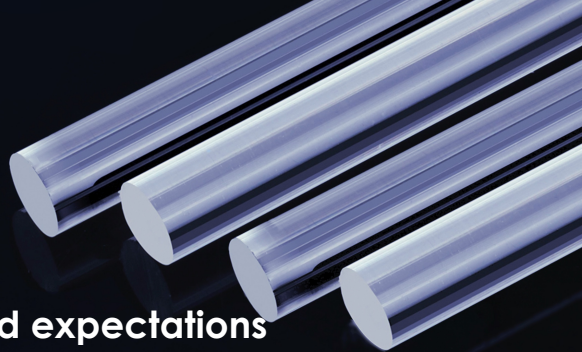


▪ Methafilcon

Still very wide spread ionic hydrophilic material with 55% Water content which delivers excellent visual acuity and stability. Tried and tested, this newly engineered material provides high yields consistently.

Material	methafilcon
British Approved Name	Copolymer of HEMA & MAA Filcon IV 1
Water Content %	57.4 ± 2
Average measured Dk (Fatt)	18
Colours Available	Clear & Blue
UV Blocker	On request*
Expansion Ratio Radial	1.36 ± 0.03
Expansion Ratio Diametric	1.39 ± 0.04
Refractive Index Wet	1.3998 ± 0.003
Refractive Index Dry	1.5151 ± 0.004
Light Transmission	>94%
Roundness	Within 0.02mm
Diameter	12.70mm ± 0.04mm
Thickness	5.00mm ± 0.05mm

* MOQ applies



Your Global Partner, helping you exceed expectations

PMMA

The original grade of acrylic tolerated by the eye was that used in aircraft canopy manufacture, and was retained by ICI for medical use and given the name PERSPEX™ CQ.

When PERSPEX™ CQ-UV, was made available in the early 80's, it rapidly became the market standard and continued with an unblemished track record. As the small volume of PERSPEX™ CQ became a less and less significant part of ICI's world-wide acrylics business, they announced in 1997, that PERSPEX™ CQ would be withdrawn from their range.

At this point Vista Optics – already established both as manufacturer and supplier of medical grade HEMA products and distributor of PERSPEX™ CQ – decided to apply clinical quality manufacturing techniques to the cell casting of acrylic. Since 1981, tens of millions of cataract replacement operations have been carried out using Perspex CQ UV, and subsequently Vistacryl CQ UV following establishment of the equivalence of the two materials by the US F&DA in 2002.

▪ Accreditation and clinical testing

Vista Optics has been granted an FDA Masterfile - MAF 1189 - for Vistacryl CQ and CQ UV, based on equivalence and cross-referencing of the ICI (now Lucite International) Drug Masterfile DMF 1761. Further, as Perspex CQ and Vistacryl have been deemed fully equivalent, Vista have been allowed to adopt NAMSAs test data for Perspex CQ.

We have recently renewed Physicochemical and biological tests which are available to our customers after signing NDA.

▪ Key features

ICI/Vista Optics CQ UV PMMA

Methyl methacrylate monomer is controlled to meet FDA requirements of purity

A peroxide initiator is used to promote polymerisation

A benzotriazole UV blocker is employed

Polymerisation is performed using pre-polymerised syrup in proven sheet technology

Curing profiles developed to give optimum molecular weight distribution and minimal residual monomer were developed by ICI, with the same technology being transferred to Vista Optics

▪ Applications

The prime market at which the development of Vistacryl® has been directed is the ophthalmic industry, i.e. for intraocular lenses (IOLs), contact lenses and other prostheses. Due to the characteristics inherited from PERSPEX™ CQ - the chemistry and manufacturing process being identical - Vistacryl® PMMA is eminently suited to applications in the orthopaedic implant, electronics, engineering and aerospace industries, where a highly pure, very high molecular weight PMMA homopolymer is required.

▪ Availability

✓ Sheets

All material will be supplied either in 500mm by 400mm sheets (protected by approved masking film). The batch size is typically 60 to 70 sheets. Vistacryl CQ is the medical grade PMMA sheet and can be supplied with or without UV Blocker. The UV absorbing grade being designated Vistacryl CQ UV.

Vista can routinely produce sheet in the range of 2.5mm, 2.8mm and 3.1mm. However, other thickness can be produced to order.

✓ Buttons

We can supply PMMA buttons, laser-cut from sheets, in the following diameters:

10mm, 10.50mm, 12.7mm, 13.75mm, 14mm, 14.20mm, 14.5mm, 15mm, 16mm, 16.81mm, 17mm, 18mm, 19mm and 25mm.

For other dimensions outside specified above (rod-cutting), please ask.

✓ Rods

Our PMMA is also available in rod format.

Typical dimensions are:

- Diameter: 8 to 20mm
- Length: Up to 300mm

