G-ænial *Anterior & Posterior*

Effortless beauty

G-ænial – A universal composite that captures the genius of nature with one shade simplicity

G-ænial is created with natural beauty forefront in mind, so that clinicians have a composite with superior aesthetics and exceptional shade matching ability that will allow single shade restorations to blend seamlessly with the tooth.

G-ænial ANTERIOR A3

Dr M Moran, Australia

G-ænial POSTERIOR P–A2

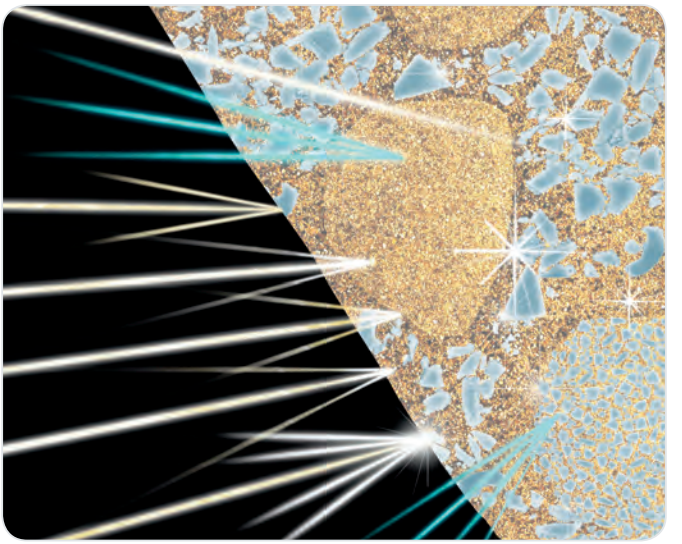
Dr J Tapia Guadix, Spain

Outstanding invisible aesthetics
The genius behind **G-ænial**

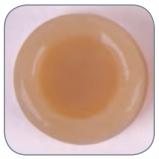
How science creates beauty

It's all about getting the light right! Our perception of the appearance of teeth is defined by the reflection of light from different angles. Light reflection is determined by differences in tooth structure.

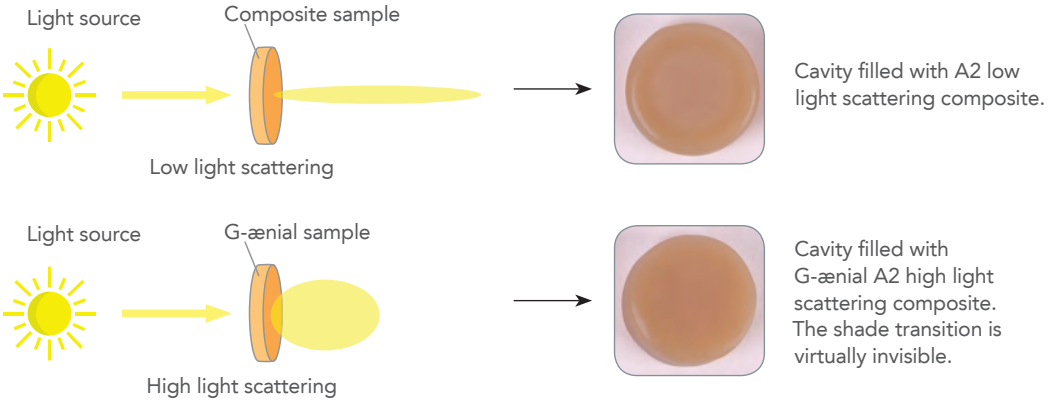
The excellent light scattering ability of G-ænial is achieved through an extremely diverse structural composition that enables it to mimick the reflectivity of a natural tooth. Like the tooth, G-ænial contains different interfaces with different optical properties, resulting in varied reflection of light.



Demonstrating how high light scattering creates a chameleon effect



Trial material
Cavity made in a block of composite A3



G-ænial – A universal composite that acknowledges that

G-ænial ANTERIOR features enhanced light scattering abilities, to bring a more natural vitality and exceptional shade matching for superior anterior aesthetics.

Prof. M Peumans, Belgium

They have subtle optical differences...

G-ænial POSTERIOR introduces shades with a deeper concentration of colour, to better match the optical properties of posterior teeth.

Dr J Tapia Guadix, Spain

G-ænial is a high strength, low shrinkage stress composite. Both Anterior and Posterior shades can have universal application

anterior and posterior teeth are different

Dr J Tapia Guadix, Spain

G-ænial ANTERIOR is designed so that clinicians can shape, flow and sculpt.

HANDLING SCALE
FLUID FIRM

and they present different placement challenges

Dr J Tapia Guadix, Spain

G-ænial POSTERIOR has a consistency that's firmer and more packable.

HANDLING SCALE
FLUID FIRM

(anterior shades can be used in posterior restorations and vice versa).

G-ænial ANTERIOR –
Beautiful natural high gloss restorations

Optimised handling

With G-ænial ANTERIOR you gain total control over your results with its smooth, non-sticky and sculptable handling.

High gloss finish

G-ænial ANTERIOR polishes quickly to a high gloss finish and the diverse filler surfaces within G-ænial ensure the surface really does shine!

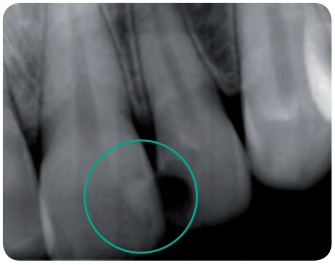
More working time

Reduce stress with working time under ambient light extended to 4 minutes.

Simplicity, even when complexity presents

For most restorations, the use of standard shades alone is sufficient to produce beautiful, natural results. For complex cases, two additional shade groups have been defined; Inside and Outside shades.

Prof M Peumans, Belgium



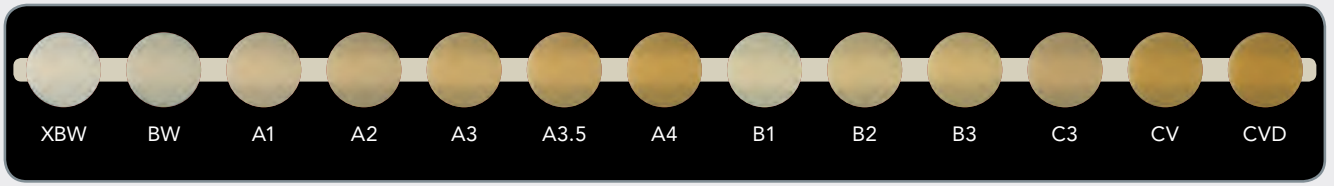
Dr J Sabbagh, Belgium

G-ænial ANTERIOR 140% Al radiopacity

G-ænial ANTERIOR – Forward thinking shading concept

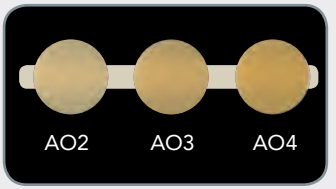
Standard shades

In those cases where no layering is required



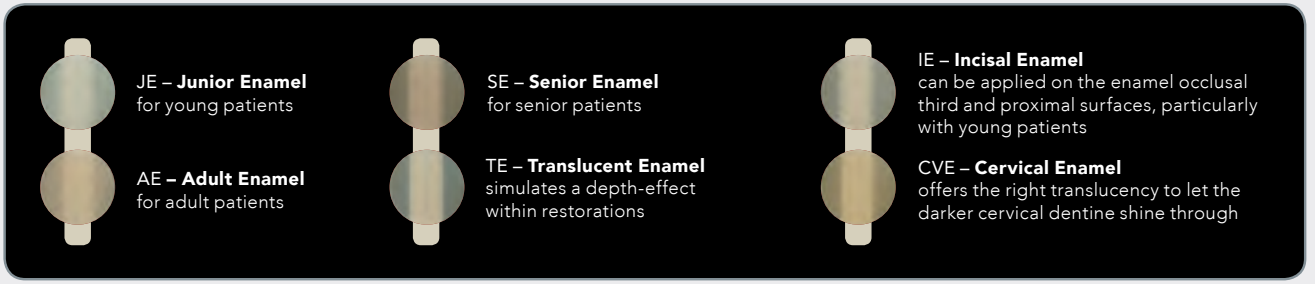
Inside shades

Inside shades add opacity and eradicate dark shinethrough often encountered in class IV restorations. They can also be placed behind a standard shade to add warmth to the final colour. Inside shades are particularly useful to mask dentine discolouration and to hide the preparation line in large class V restorations.



Outside shades

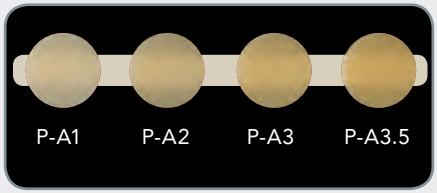
Outside shades replicate enamel and give more depth to the final restoration. Ideally we relate the colour and translucency of the natural enamel to the **age of the patient** and the choice of the enamel shade is made accordingly. Outside shades will also help create specific visual effects, for example to help mimic the value (lightness/darkness) of a tooth.



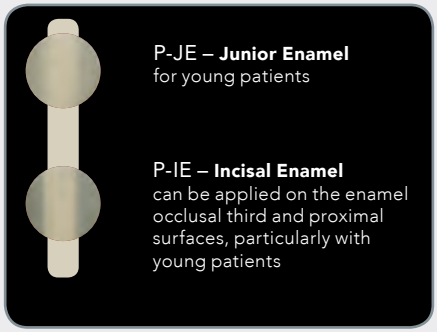
G-ænial POSTERIOR – low stress simplicity

Simple shade selection

G-ænial POSTERIOR has a simple selection of four basic shades that will blend beautifully with the surrounding tooth colours.

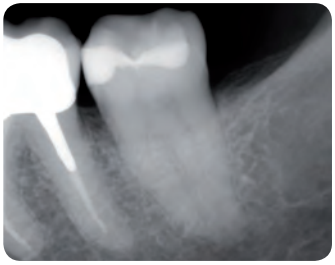


G-ænial POSTERIOR has two outside enamel shades P-JE and P-IE. These shades copy the value of a tooth, to mimic age-dependent changes in the enamel and to give more depth to a final restoration.



P-A2, P-A1

Dr G Milicich, New Zealand



Dr E D'Incau, France

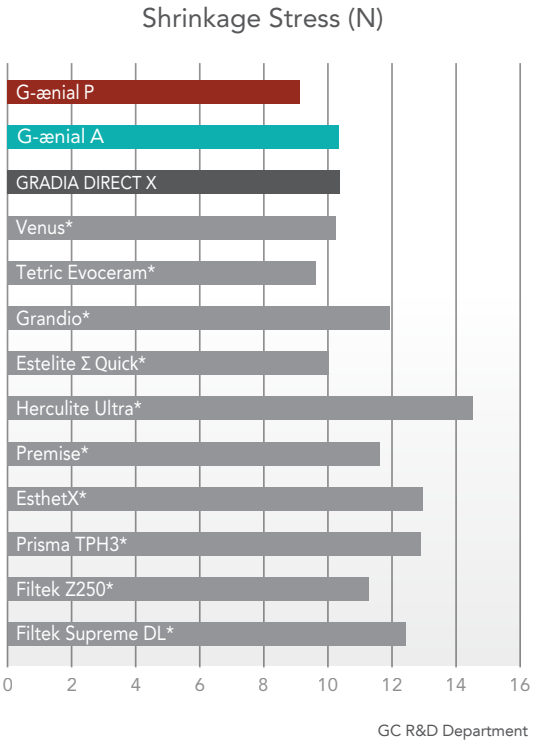
G-aenial POSTERIOR 250% Al radiopacity

Low shrinkage stress

G-ænial is formulated for both strength and low shrinkage stress. Posterior restorations are often at greater risk of marginal breakdown and G-ænial helps minimise the risk through reduced polymerisation shrinkage stress at the adhesive tooth interface.

Firm handling

Extensive feedback evaluations clearly identified a need for a firmer material for posterior restorations that gives more control to contour and build anatomical form. G-ænial POSTERIOR has a more packable consistency, yet still flows under pressure to ensure intimate adaptation to the cavity walls.



Shrinkage stress is the amount of stress created as a result of polymerisation shrinkage combined with other influencing factors – eg: a composite's modulus of elasticity and the nature of its polymerisation reaction.

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G-ænial ANTERIOR & POSTERIOR – Unique composition

G-ænial is a light cured, radiopaque microfill hybrid composite restoration with diverse multifaceted particles and combination of fillers-- its size and distribution within is carefully calculated so that when combined, it contributes to its low level of shrinkage stress and provides the best aesthetic results and exceptional chameleon effect which can be achieved with just one shade of G-aenial.

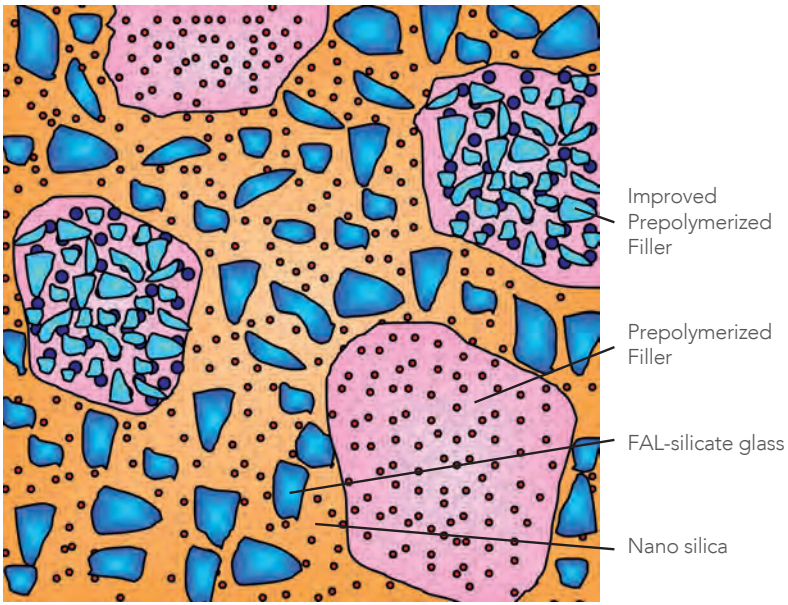
Filler

Two different kind of pre-polymerised fillers are used, offering clinical useful radiopacity while keeping perfect aesthetics, excellent physical performance and user-friendliness for both G-aenial Anterior and Posterior.

Matrix

The matrix consists of a mixture of urethane dimethacrylate (UDMA) and dimethacrylate co-monomers. G-ænial is bis-GMA free.

Composition of G-ænial



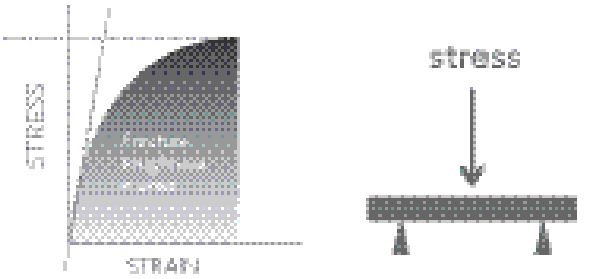
Strong and flexible

Fracture toughness is a measure of a material's ability to resist the propagation of a formed crack, also defined as the toughness against bending stress.

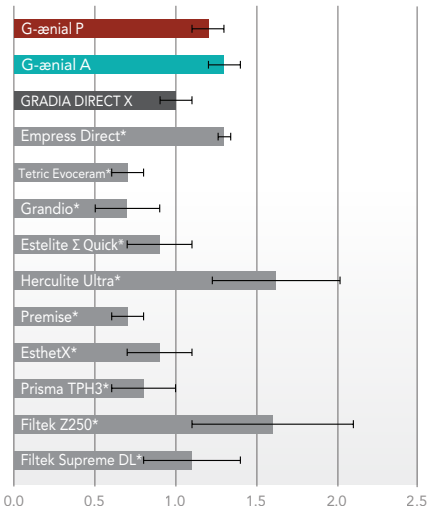
Modulus of elasticity is a measure of the rigidity of the material; it is defined by the initial slope of a stress- strain curve.

Flexural strength is a measure of a material's ability to resist deformation under load.

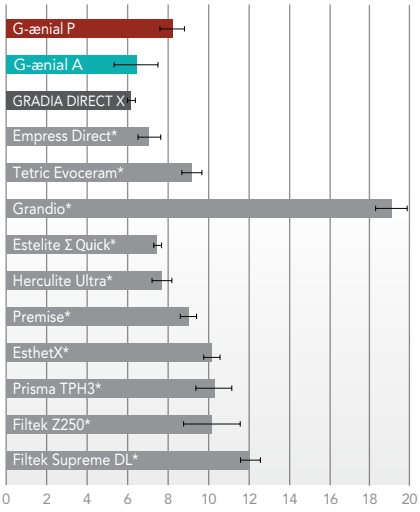
Mechanical properties



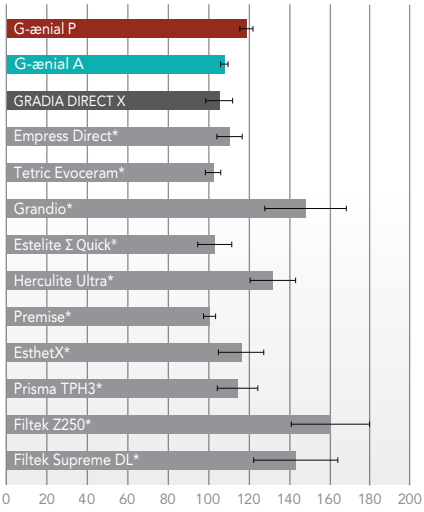
Fracture Toughness (Mpa)



Modulus of Elasticity (Gpa)



Flexural strength (Mpa)



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GC R&D Department

Clinical observations

Case 1

1. A 79-year old patient presented for treatment after injury.

2. An alginate impression of the anterior sections (upper and lower) was taken to make a wax mould for treatment planning and to provide a greater ability to handle the shapes and volumes of the various composite layers.

3. Both central maxillary incisors were prepared using diamond burs. Tooth 11 required a large bevel to increase the surface for adhesion to enamel and to obtain greater retention.

4. After etching and application of G-BOND, a palatine silicone ring was positioned (previously prepared on the wax working model) to recreate the layer of palatine enamel.

5. A thin layer of enamel composite (G-ænial AE) is applied with a flat, slightly moistened brush.

6. Carefully place transparent acetate matrices in the interproximal spaces, using transparent wedges to fix them in place.

7. The interproximal areas were filled with a thin layer of enamel composite (G-ænial AE) which bonded to the previously created palatine surface.

8. To conceal the fracture line, G-ænial AO3 was placed along this line, with small indentations to transform it into an irregular line.

9. G-ænial A3 was used to recreate the rest of the dentine, which gave shape to the mamelons and covered part of the bevel.

10. An extremely thin layer of highly translucent enamel composite (G-ænial TE) was placed, leaving one section of the preparation bevel with no cover, carefully filling the space around the mamelons to recreate a natural enamel zone.

11. G-ænial AE is used to create the vestibular enamel layer.

12. After completion, matrices and wedges are removed and polishing begins using interproximal strips, tungsten carbide burs, diamond-coated rubber pads and polishing discs. A diamond paste was used for final polishing.

Dr J Tapia Guadix, Spain

Clinical observations

Case 2

1. Fractured tooth.

2. Enamel margins selectively acid etched prior to dentin conditioning with polyacrylic acid.

3. Fuji IX EXTRA is manipulated into place with a microbrush dipped in Fuji LINING LC.

4. A thin layer of flowable is applied to the cavity floor and distal enamel margin and polymerised.

5. The restoration is then incrementally built with G-ænial POSTERIOR using P-A2 for the deeper sections and P-A1 for the final surface layer.

6. Completed restoration.

Dr G Milicich, New Zealand

Clinical observations

Dr Matteo Basso, Milan, Italy

Dr Ayad Mouayad Al-Obaidi, Iraq

Dr P Sheridan, Australia

Dr J Tapia Gaudix, Spain

Dr Jason Smithson, London

Dr Anthony Mak, Australia

G-ænial

SYRINGES

G-aenial ANTERIOR
Content per syringe 2.7ml (4.7g)
Standard: XBW, BW, A1, A2, A3, A3.5, A4, B1,B2, B3, C3,CV, CVD
Inside special: AO2, AO3, AO4
Outside special: JE, AE, Se, IE, TE, CVE

G-aenial POSTERIOR
Content per syringe 2.7ml (5.5g)
Standard: P-A1, P-A2, P-A3, P-A3.5
Outside special: P-JE, P-IE

QUICK START KIT ANTERIOR
Content per syringe 2.7ml (4.7g)
Quick Start Kit 7 syringes of:
A1, A2, A3, B2, JE, AE, IE and
a shade guide

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