

GC®

Create your world with

initial



*One Ceramic System. One Ceramic Build-Up.
One Ceramic Choice.*



GC®

GC America Inc.

Advancing the Art and Science of Dentistry

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<http://www.gcamerica.com>

GC AMERICA INC.

One ceramic system



Now you can create your own world. A world of ceramic restorations with stunning natural beauty and all the diversity required for each and every indication. All from one source – the new, extremely simple, state of the art ceramic system - GC Initial.

SIX INTEGRATED CERAMICS

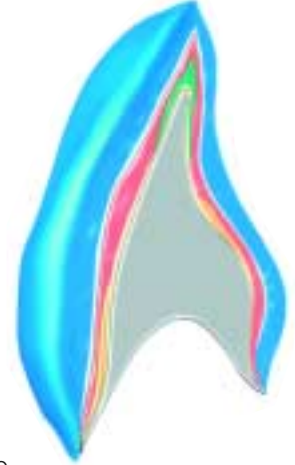
GC Initial represents a shift in ceramic systems. It consists of six ceramics in one integrated product line with one color system, which can create metal-ceramic restorations all the way to full-ceramic. No longer do you have to spend valuable time learning to use a myriad of different ceramics from an array of manufacturers to create the variety of restorations which may be needed to complete a case.

SPECIFICALLY ADAPTED

Each GC Initial ceramic is adapted to meet the needs of its particular fabrication process and framework such as its



coefficient of thermal expansion (or CTE). Stress cracks and fractures are therefore avoided and strong bonding, adhesion and retention are assured.



ONE SHADE SYSTEM – ONE LAYERING SYSTEM

The GC Initial ceramic line offers a full-range system that can be used easily and efficiently in all ceramic indications, and you only need one layering technique and one shade system.

The Initial ceramic system allows you to use the identical processing method for all components using a single shade system. You don't have to readjust to other unaccustomed layering techniques or layering systems. GC Initial gives you more of that essential time to be creative.



Final Initial MC Restoration



Final Initial ZR Restoration

GC INITIAL – AN UNCOMPROMISING CERAMIC SYSTEM FOR THE ENTIRE SPECTRUM OF INDICATIONS



3 unit bridge, opaque firing



Pressed coping, PC/LF



Zirconium Framework



Metal Framework

GC's broad Initial ceramic system covers all of today's and all of tomorrow's ceramic indications. It doesn't matter if you are working with full ceramic, metal-based or zirconium oxide frameworks. This system has its own components when low-fusing technology or the ceramic pressing techniques are used.

GC Initial is also ideally suited for use with the proven sintering technique: GC Initial MC is used for the first coating on investment dies. Your work can then be completed easily and efficiently with the "low-fusing" component, GC Initial LF.



GC Initial MC for metal alloy frameworks

Ceramic for metal alloy with a normal expanding CTE whether containing silver, a high or reduced gold content or palladium. Also for NPA (Non-Precious Alloy), and electroforming copings. Use the sintering technique to create inlays, onlays and veneers on refractory dies.



GC Initial LF for low-fusing techniques

Synthetic ceramic for low temperature firing. Use on metal alloys with a CTE compatible with those for GC Initial MC. Can be easily polished for a 'true-to-life' glossy sheen and reduced occlusal abrasion. Use to correct restorations made with GC Initial MC or as a build-up material on GC Initial PC copings.



GC Initial Ti for titanium frameworks

Ceramic for creating restorations which are highly esthetic and biocompatible. To bond the ceramic securely to the framework use GC Initial Titanium Bonder.



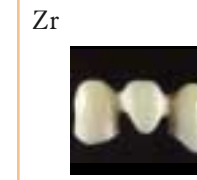
GC Initial AL for aluminium oxide frameworks

Ceramic with colour properties adapted for use on aluminium oxide frameworks, allowing perfect and homogeneous build-up of the final restoration.



GC Initial Zr for zirconium oxide frameworks

Ceramic for use on the high strength zirconium oxide framework, which is ideal for the fabrication of delicate substructures such as bridges.



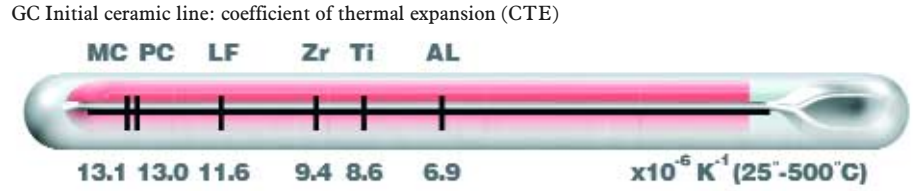
GC Initial PC for pressable techniques

Ceramic for pressing whether layering or staining is preferred. For layering use GC Initial LF.



Ideal for use with the specially developed high-speed investment materials.

initial



One color line

for matched shades across the system



PERFECT MATCH REGARDLESS OF THE PROCESS

Besides being specifically adapted to almost any substructure material, all the shades across the entire GC Initial System have a carefully developed shade system. This means the esthetics of each restoration are in perfect match no matter which indication type or ceramic process is used.

SIMPLE TO CROSS-MATCH

Matched shades make it easy to esthetically cross-match restorations, ideal for clinical situations which require several different frame structures. With GC Initial there is no need to modify your technique as is so often the case if using ceramics from a variety of manufacturers.

LIFELIKE LAYERING SHADES

An array of unique shades have been developed for GC Initial with particularly deep chroma, high fluorescence, opalescence and/or high transparency. With GC Initial you get superb color matching of natural tooth structures, even in the thinnest of layers.

STAIN AND EFFECT SHADES

To add individual touches and accents with GC Initial, a variety of unique shades have been developed for internal layering and external staining.

All shades are matched to the Vitapan® Classical shade guide. Vita® is a registered trademark of Vita Zahnfabrik, Bad Säckingen.



Full crowns: CLF+ start of enamel layering



Enamel-Transpa and final layering



Mamelon structure + CLF



Final restoration front teeth



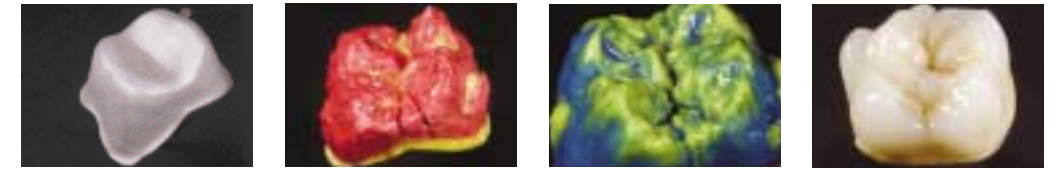
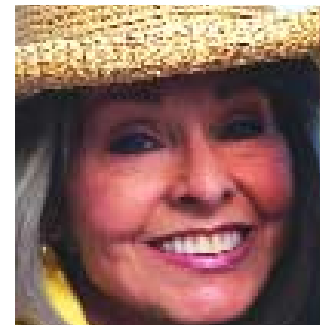
Oral View



Oral View

One build-up

for standard or multi-chromatic layering



Molar: dentin layer

Dentin+Enamel+ Enamel Opal

Finished Molar with occlusal detail

NATURAL BUILD-UP

Just as the special matched shades of GC Initial give superb color matching even in very thin layers, the layers of the restoration can be constructed in a manner very similar to the structural layers in a natural tooth. Not only does this help simplify the build-up procedure, it also contributes to the lifelike esthetics of the final result.



3 unit frontal bridge - Initial Zr frame modifier



frontal bridge-CLF-layer



Chroma and mamelon structure - Inside-Invivo stains



Finished Bridge



3 unit frontal bridge, palatal view, Fluo-Dentin, Dentin, and Enamel Opal



Final functional contouring EOP



Finished Bridge

First opaque layer (as a 'wash' bake) and second opaque layer (fire and add Opaque Modifiers if required)

Inside Primary Dentin layer on the cervical part



Opacus Dentin layer on the incisal border

Dentin layer

Clear Fluorescence layer

Enamel layer up to the final shape (and/or Enamel Opal/Translucent/ Translucent Modifiers)

End result



STANDARD BUILD-UP TECHNIQUE:

GC Initial MC GC Initial LF GC Initial Ti

initial

One shade system



layering shades

TO MATCH ENAMEL

Enamel/Enamel Intensive
 Graduated enamel powders match natural incisal areas. Enamel Intensive can be mixed with Enamel or used directly.

Enamel Occlusal
 Opacious enamel create lifelike occlusal surfaces in the presence of any slightly opacious or milky white enamel spots.

Enamel Opal
 Enamel colours with a high level of opalescence are created in conjunction with high translucency.

TO MATCH DENTIN

Clear Fluorescence
 Unique to GC Initial – a highly transparent shade to match the fine line of ‘clear material’ in a natural tooth. Gives lifelike transmission and reflection of light as well as deep, realistic colour in a very thin layer (max 0.2mm).

Dentin
 Gives lifelike chroma to the dentin body and excellent masking even in very thin layers.

Inside Primary Dentin
 Unique to GC Initial - approximal, cervical and oral shades which give very deep chroma and high fluorescence in very thin layers. Also for mamelons and incisal effects.

Opacus Dentin/Opacus Dentin Modifiers
 Intensifies chroma and gives lifelike shades in very thin layers. Reduces dark, shadow areas and transmitted intra-oral light.

Fluo Dentin
 Specially developed for GC Initial – a high fluorescent dentin in very thin layers. For use instead of Opacus Dentin to meet the special needs of Zirconium Oxide and Aluminium Oxide copings during the build-up procedure.

FOR EXTRA TRANSLUCENCY

Translucent/Translucent Modifiers
 Translucent has two shades: Neutral and for extra opalescence, Opal. Translucent Modifiers can be mixed with Translucent or used directly.

Cervical Translucent
 Very translucent, highly fluorescent, deep colour shades to add lifelike depth to the cervical third. Can also be used in other parts of the restoration.

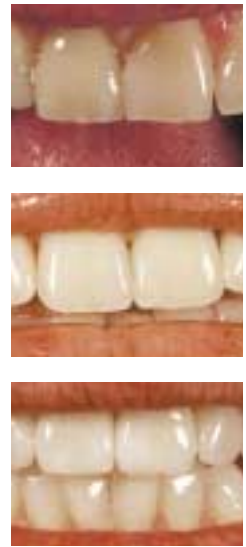
FOR CERAMIC SHOULDERS

Shoulder Transpa
 Transparent, highly fluorescent shades.

Shoulder Opaque
 Opacious, highly fluorescent shades.

TO MASK METAL COPINGS

Opaque/Opaque Modifiers
 Excellent masking ability especially in very thin layers. Shades are colour matched to suit their respective frameworks making it easier to create perfect aesthetics. Available in a powder for GC Initial LF and GC Initial Ti and a paste for GC Initial MC.

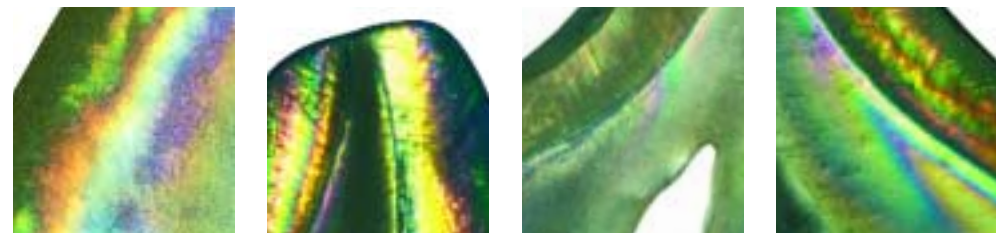


stain and effect shades

- INvivo**
Fluorescent stains for internal and external use.
- INsitu**
Non-fluorescent stains for external use.
- INover**
Internal/external stains to paint on pressable ceramic copings when using the staining technique with GC Initial PC. Also for use with GC Initial MC and GC Initial LF.
- INCisio**
Internal stain to create the illusion of depth in the incisal part of the crown.



initial



One choice



for natural beauty and function



BEAUTIFULLY NATURAL

GC Initial ceramic is based on the structural form of nature and made to the highest quality. This means the optical properties of the restoration such as diffuse reflection, fluorescence, opalescence and translucency mimic those of the natural tooth. Its surface can be easily polished for a realistic mirror reflection and a natural glossy sheen. Whatever the indication or fabrication process employed, it is very simple to make a beautiful, natural-looking restoration.

NATURALLY FUNCTIONAL

The composition and quality of GC Initial gives you ceramic which is easy to handle and extremely stable. It is simple to contour and very technique tolerant. Ceramic color and optical properties will not change even after several firings. It has very low ceramic shrinkage, saving time and providing high firing stability for shaping form and creating shadings. The structure of GC Initial ceramic also has excellent physical properties so final restorations are exceedingly durable and fully functional.

initial

metal

low-fusing

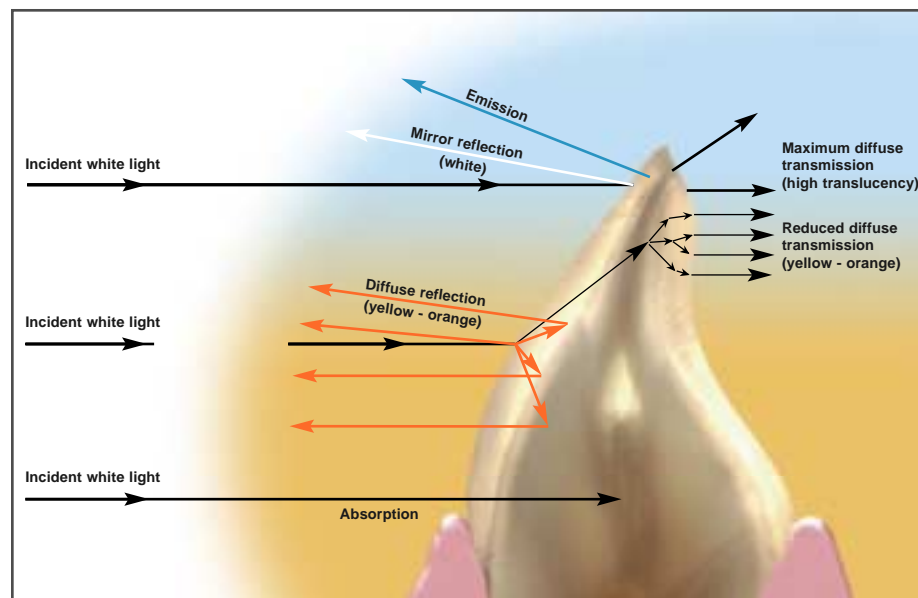
titanium

aluminium

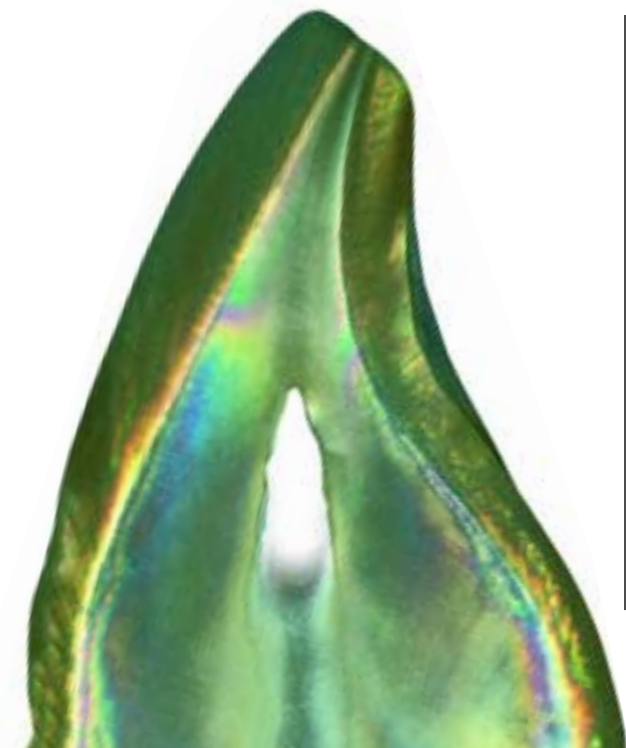
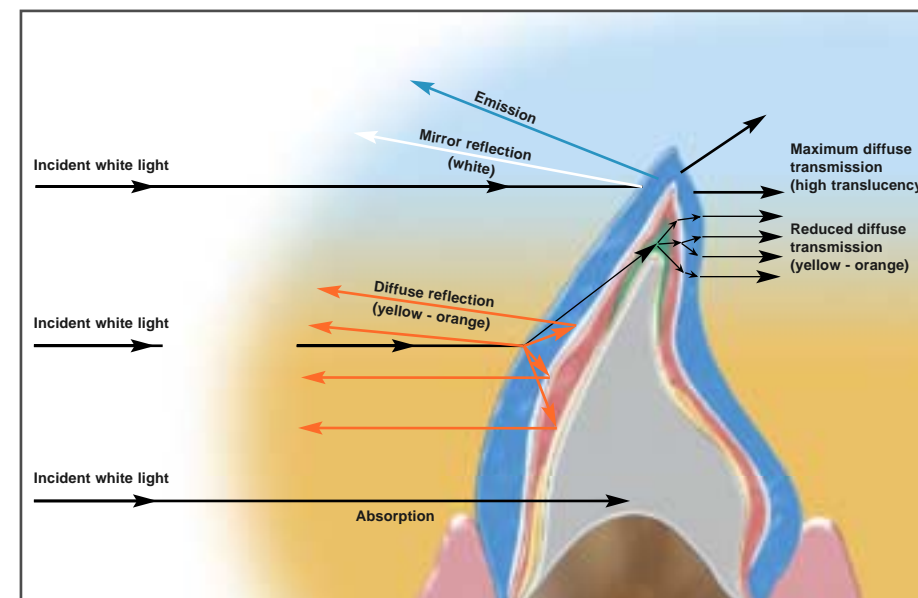
zirconium

pressable

Light reflection and absorption properties of natural tooth



Light reflection and absorption properties of GC Initial restoration



Create your world with

initial

One System. One Build-up. One Choice.



GC Initial for metal-ceramic

GC Initial MC metal-ceramic

CTE: $13.1 \times 10^{-6} \text{K}^{-1}$ (25°-500° C)
Firing temperature: 890° C
(First dentine firing)



GC Initial MC Basic Set
Paste Opaque (syringes) 16, Dentin 16, Enamel 4, INside Basic 3, Clear Fluorescence, Translucent 2, Glaze, INCisio, 25ml Glaze Liquid, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877001

GC Initial MC Basic Plus Set
Paste Opaque Modifier (syringes) 6, Opaqus Dentin 16, Opaqus Dentin Modifier 2, Shoulder Transparent 7, Shoulder Opaque 3, Translucent Modifier 5, Enamel Intensive 4, Correction Powder, 50ml Modifier 5, Enamel Intensive 4, Correction Powder, 50ml Shoulder Liquid, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877002

GC Initial MC Advanced Set
INside 11, Cervical Translucent 5, Enamel Occlusal 3, Enamel Opal 4, Fluo-Dentin 3, Gingival Universal, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877003

GC Initial MC Paste Opaque Set
Paste Opaque and Modifier 16
Part No. 877004

GC Initial LF Low-fusing ceramic

CTE: $11.6 \times 10^{-6} \text{K}^{-1}$ (25°-500° C)
Firing temperature: 770° C
(First dentine firing)



GC Initial LF Basic Set
Powder Opaque 16, Dentin 16, Enamel 4, INside Basic 3, Clear Fluorescence, Translucent 2, Glaze, INCisio, 50ml Opaque Liquid, 25ml Glaze Liquid, 50ml Modelling Liquid.
Part No. 877005

GC Initial LF Basic Plus Set
Powder Opaque Modifier 6, Opaqus Dentin 16, Opaqus Dentin Modifier 2, Shoulder Transparent 7, Shoulder Opaque 3, Translucent Modifier 5, Enamel Intensive 4, Correction Powder, 50ml Opaque Liquid, 25ml Shoulder Liquid, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877006

GC Initial LF Advanced Set
INside 11, Cervical Translucent 3, Enamel Occlusal 3, Enamel Opal 4, Fluo-Dentin 3, Gingival Universal, INover 4, 50ml Modelling Liquid, 25ml Glaze Liquid.
Shade Guides not included.
Part No. 877007

GC Initial MC/LF Connector Paste
Part No. 877030

GC Initial for the pressing technique

GC Initial PC Ceramic for the pressing technique

CTE: $13.0 \times 10^{-6} \text{K}^{-1}$ (25°-500° C)
Pressing temperature: 950° C



GC Initial PC Starter Set
Press Pellets (20x50 pieces) Dentin 10, Bleached 2, Veneer Enamel VE-2, Occlusal 2, Translucent 3, Opaque 2, One-way press plungers 5, Ringbase system large 3, Silicone Ring large, Ringbase system small 3, Silicone ring small, GC PressNvest Powder, GC PressNvest Liquid.
Shade Guides not included.
Part No. 877018

GC PressNvest

High-speed investment material for the pressing technique



GC PressNvest Powder
4kg, 40 x 100g
Part No. 800171

GC PressNvest Powder
4kg, 20 x 200g
Part No. 800172

GC PressNvest Liquid
900ml
Part No. 800173

GC Initial INVivo/INSitu for MC, LF, PC

Ceramic stains for internal-external use



GC Initial INVivo/INSitu Stain Set for MC, LF and PC
INVivo (fluorescence) 13, INSitu (non-fluorescence) 3, Glaze Powder, 25ml Glaze Liquid.
Part No. 877016

GC Initial Shade Guides



MC/LF/Ti, Basic Set
Part No. 877020

MC/LF/Ti, Basic Plus Set
Part No. 877021

MC/LF/Ti, Advanced Set
Part No. 877022



GC Initial for full ceramic aluminium or zirconium oxide

GC Initial AL Ceramic for aluminium oxide frameworks

CTE: $6.9 \times 10^{-6} \text{K}^{-1}$ (25°-500° C)
Firing temperature: 910° C
(First dentine firing)



GC Initial AL Basic Set
AL Liner 6, Dentin 16, Opaque Dentin Modifier 2, Enamel 4, Enamel Intensive 4, Clear Fluorescence, Translucent 2, Translucent Modifier 5, Glaze, INCisio, 25ml Glaze Liquid, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877008

GC Initial AL Advanced Set
INside 11, Cervical Translucent 5, Enamel Occlusal 3, Enamel Opal 4, Shoulder Transparent 7, Shoulder Opaque 3, Fluo-Dentin 3, Gingival Universal, Correction Powder, 50ml Modelling Liquid, 50ml Shoulder Liquid.
Shade Guides not included.
Part No. 877009

GC Initial Zr Ceramic for zirconium oxide frameworks

CTE: $9.4 \times 10^{-6} \text{K}^{-1}$ (25°-500° C)
Firing temperature: 810° C
(First dentine firing)



GC Initial Zr Basic Set
Frame Modifier 3, Dentin 16, Opaqus Dentin Modifier 2, Enamel 4, Enamel Intensive 4, Clear Fluorescence, Translucent 2, Translucent Modifier 5, Glaze, INCisio, 25ml Glaze Liquid, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877010

GC Initial Zr Advanced Set
INside 11, Cervical Translucent 5, Enamel Occlusal 3, Enamel Opal 4, Shoulder Transparent 7, Shoulder Opaque 3, Fluo-Dentin 3, Gingival Universal, Correction powder, 50ml Modelling Liquid, 50ml Shoulder Liquid. Shade Guides not included.
Part No. 877011

GC Initial for titanium-ceramic

GC Initial Ti Titanium ceramic

CTE: $8.6 \times 10^{-6} \text{K}^{-1}$ (25°-500° C)
Firing temperature: 780° C
(First dentine firing)



GC Initial Ti Basic Set
Powder Opaque 16, Dentin 16, Enamel 4, INside Basic 3, Clear Fluorescence, Translucent 2, Glaze, INCisio, 50 ml Opaque Liquid, 25ml Glaze Liquid, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877013

GC Initial Ti Basic Plus Set
Powder Opaque Modifier 6, Opaque Dentin 16, Opaqus Dentin Modifier 2, Shoulder Transparent 3, Translucent Modifier 5, Enamel Intensive 4, Correction Powder, 50ml Opaque Liquid, 25ml Shoulder Liquid, 50ml Modelling Liquid. Shade Guides not included.
Part No. 877014

GC Initial Ti Advanced Set
INside 11, Cervical Translucent 5, Enamel Occlusal 3, Enamel Opal 4, Fluo-Dentin 3, Gingival Universal, 50ml Modelling Liquid.
Shade Guides not included.
Part No. 877015

GC Initial INVivo/INSitu for AL, Zr, Ti

Ceramic stains for internal-external use



GC Initial INVivo/INSitu Stain Set for AL, Zr, Ti
INVivo (fluorescence) 13, INSitu (non-fluorescence) 3, Glaze Powder, 25ml Glaze Liquid.
Part No. 877017

GC Initial Shade Guides



AL/Zr, Basic Set
Part No. 877023

AL/Zr, Advanced Set
Part No. 877024

GC Initial Entrance Kits

GC Initial Entrance Kits

Introductory sized kits for trying out the desired ceramic.



Initial MC Entrance Kit
Part No. 877035

Initial LF Entrance Kit
Part No. 877036

Initial AL Entrance Kit
Part No. 877037

Initial Zr Entrance Kit
Part No. 877038

Initial Ti Entrance Kit
Part No. 877039



GC AMERICA INC.

One modular ceramic system



for your lab today
and in the future



CREATE IT YOUR WAY

To simplify the use of GC Initial even further, the system is available in modular ceramic sets so you can choose the esthetic standard to which you create. Each set contains different components, by adding them together you can create increasingly esthetic restorations. Begin with module 1, the Basic Set and add further modules at any time as required, or combine modules for maximum aesthetic potential from the start.

THE PERFECT CHOICE

With the GC Initial system you can choose one or more or every ceramic in the line. Begin with one or a few ceramics and you can move on to the others at any time without having to learn new working methods. Given its flexibility, GC Initial is the perfect choice for today's laboratories, now and in the future - specialists in metal-ceramic restorations, specialists in full-ceramic restorations and those who make all types of restorations.

SIMPLIFY YOUR BUSINESS

With the same shading system and the same build-up technique regardless of the substructure or framework, GC Initial requires a short learning curve and can be easily adapted by high volume labs or tooth design boutiques. Developed for maximum technique tolerance, GC Initial is very forgiving and has extremely low shrinkage.



MODULE 1 Basic Set

Contains all the fundamental opaque ceramics, shade ceramics and liquids. Designed for basic, standard build-up and to meet the 'standard' requirements of the Vitapan Classical shade guide. Available for:

- GC Initial MC
- GC Initial LF
- GC Initial Ti
- GC Initial AL
- GC Initial Zr



MODULE 2 Basic Plus Set

Contains additional shades and accessories such as Opaque Modifiers, Opacus Dentin and shoulder ceramics. Add to the Basic Set to lift your restorations to a higher aesthetic level. Available for:

- GC Initial MC
- GC Initial LF
- GC Initial Ti



MODULE 3 Advanced Set

Completes the GC Initial system by adding the remaining shades and accessories to either the Basic or Basic Plus Set, so enabling restorations with the most advanced aesthetics. Available for:

- GC Initial MC
- GC Initial LF
- GC Initial Ti
- GC Initial AL
- GC Initial Zr

Start creating your world with GC Initial. Contact your dental laboratory supply dealer or local GCA representative.

GC
GC AMERICA INC.

One advanced ceramic system

for all your fabricating needs

TECHNICAL SPECIFICATIONS

GC Initial MC

(EN ISO 9693:2000)

Property	Measure	Value
First dentine firing	° C	890
CTE (25-500° C)	10 ⁻⁶ ×K ⁻¹	2nd firing 13.1 4th firing 13.3
Glass transition temperature	° C	575
Solubility	µg/cm ²	25
Density	g/cm ²	2.52
Flexural strength	MPa	84
Bonding strength	MPa	50
Mean particle size (µm)	D 50 %	25

GC Initial LF

(EN ISO 9693:2000)

Property	Measure	Value
First dentine firing	° C	770
CTE (25-500° C)	10 ⁻⁶ ×K ⁻¹	2nd firing 11.6 4th firing 11.8
Glass transition temperature	° C	510
Solubility	µg/cm ²	15
Density	g/cm ²	2.48
Flexural strength	MPa	80
Bonding strength	MPa	50
Mean particle size (µm)	D 50 %	21.2

GC Initial PC

(EN ISO 9693:2000)

Property	Measure	Value
Pressing temperature	° C	950
CTE (25-500° C)	10 ⁻⁶ ×K ⁻¹	13.0
Glass transition temperature	° C	580
Solubility	µg/cm ²	25
Flexural strength	MPa	115
Mean particle size (µm)	D 50 %	25.0

GC Initial AL

(EN ISO 9693:2000)

Property	Measure	Value
First dentine firing	° C	910
CTE (25-500° C)	10 ⁻⁶ ×K ⁻¹	2nd firing 6.9 4th firing 6.9
Glass transition temperature	° C	600
Solubility	µg/cm ²	11
Density	g/cm ²	2.41
Flexural strength	MPa	70
Mean particle size (µm)	D 50 %	24.2

GC Initial Zr

(EN ISO 9693:2000)

Property	Measure	Value
First dentine firing	° C	810
CTE (25-500° C)	10 ⁻⁶ ×K ⁻¹	2nd firing 9.4 4th firing 9.4
Glass transition temperature	° C	550
Solubility	µg/cm ²	12
Density	g/cm ²	2.43
Flexural strength	MPa	70
Mean particle size (µm)	D 50 %	21.5

(The stated technical, physical values refer to the results of internal tests)

GC Initial Ti

(EN ISO 9693:2000)

Property	Measure	Value
First dentine firing	° C	780
CTE (25-500° C)	10 ⁻⁶ ×K ⁻¹	2nd firing 8.6 4th firing 8.6
Glass transition temperature	° C	575
Solubility	µg/cm ²	11
Density	g/cm ²	2.45
Flexural strength	MPa	70
Mean particle size (µm)	D 50 %	22.2

(The stated technical, physical values refer to the results of internal tests)

System compatibility	MC	LF	PC	INvivo/INsitu MC, LF, PC
GC Initial MC	--	Yes	No	Yes
GC Initial LF	Yes	--	Yes	Yes
GC Initial PC	No	Yes	--	Yes
GC INvivo/INsitu MC, LF, PC	Yes	Yes	Yes	--

initial