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Initial™ LiSi Block from GC

Lithium Disilicate
CAD/CAM block

Frequently Asked Questions

Initial LiSi Block from GC

Lithium Disilicate CAD/CAM Block

1. What is Initial LiSi Block ?

1.1 Definition

Initial LiSi Block is a Lithium Disilicate Glass Ceramic CAD/CAM Block.

1.2 Positioning

"The first fully crystallized lithium disilicate CAD/CAM block to offer speed, aesthetics and strength in one universal block"

1.3 Main Product Features

- **Mill, polish, place!**
  - The fully crystallised lithium disilicate block is **milled in less than 15 minutes** and immediately ready for polishing!
  - **Polishing** can be done **in 10 minutes** and the restoration is **ready for luting**
  - Alternatively, the restoration **can be characterised in only 20 minutes**

- **HDM technology :**
  - Extremely smooth margins for a **seamless fit**
  - Small and dense crystal network for **high precision, speed and aesthetics**
  - High acid-resistance to prevent erosion
  - **Universal indications**

- **Beautifully painted with Initial painting solutions**
  - Impressive **3D effects** with **Initial Lustre Pastes ONE**
    - Ready-to-use ceramics for painting
    - Adjust chroma, value and brightness
  - **Deep characterisation** with **Initial Spectrum Stains**
  - **Micro-layering** for outstanding results **with IQ SQIN**

- **A material you can rely on**
  - **Durable** and **antagonist-friendly**
  - Dense matrix **preventing wear** over time
  - Fully crystallised: **same flexural strength**, whether fired or polished
  - **Strong** enough for posterior and **beautiful** for anterior restorations

2 Indications

2.1 What are the main indications of Initial LiSi Block ?

1. Metal free indirect restorations:
    a. full crown,
    b. inlay,
    c. onlay,
    d. veneer
2. Implant supported crown

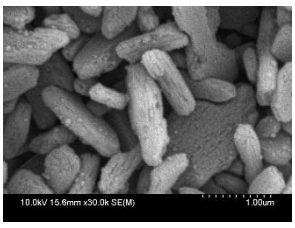
2.2 When is Initial LiSi Block not indicated?

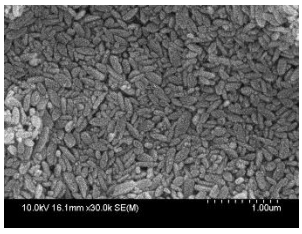
- Severely reduced residual dentition
- Severely reduced occlusal vertical dimension
- Parafunctions (e.g. suffering from bruxism)

3 Composition

3.1 What is the composition of Initial LiSi Block?

Initial LiSi Block is a fully crystalised lithium disilicate material.
Within its glass matrix there are very fine lithium disilicate crystals whose shape, size and diameter is optimized to disperse evenly and to form a very uniform, dense structure. This material is made using the HDM technology for CAD/CAM.



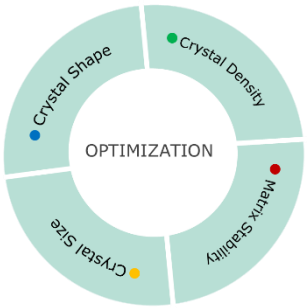


SEM image of lithium disilicate blocks in NaOH etching for 3 days at 80°C

Source, GC R&D, Japan, 2019. Data on file.

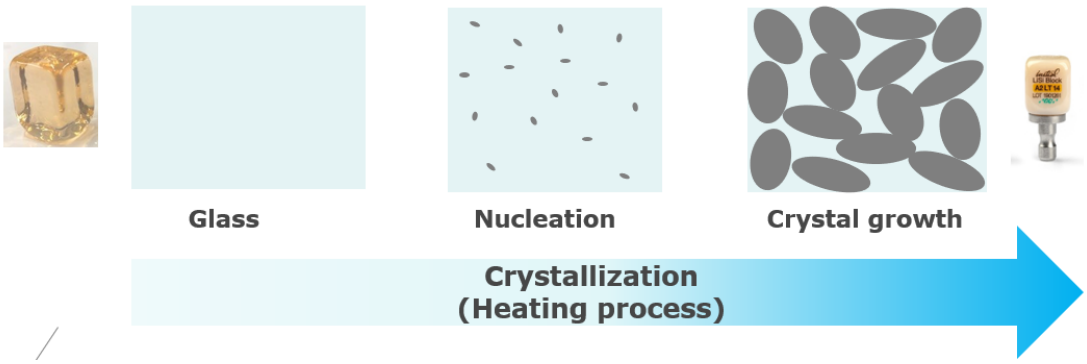
3.2 What is HDM for CAD/CAM?

HDM stands for High Density Micronisation. This is a technology used by GC R&D to produce lithium disilicate without the need of crystallization. This technology consists of optimizing the crystal size, crystal density and crystal shape in such a way that once treated with heat they are dispersed evenly in the matrix to give it stability and strength.



3.3 What is the crystallization process?

Initial LiSi Block is made using a similar method to the pressable material. Within the glass matrix, lithium oxide is inserted. This is then treated with high heat where nuclei are formed and as the heat increases these nuclei grow and become crystals. This is known as the crystallization process. Other materials are sold in a semi-crystalized phase, where the customer still needs to treat the material with heat to reach the final version. Initial LiSi Block is already a fully crystalized material which is ready to use. This is made possible thanks to the very small particles we use inside the glass matrix.

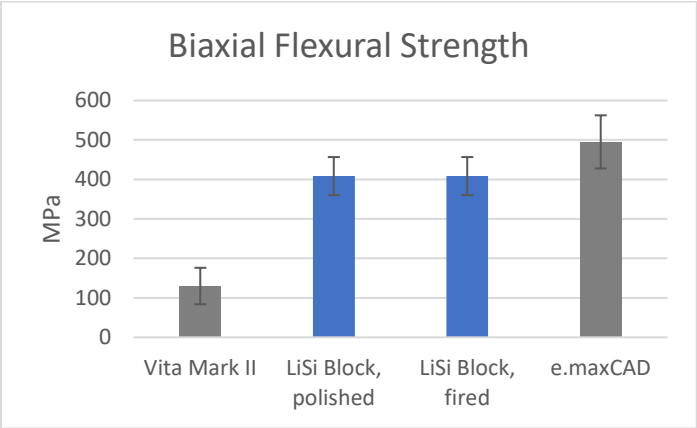


4 Physical Properties

4.1 What is the flexural strength of Initial LiSi Block?

Initial LiSi Block reaches 408MPa in biaxial flexural strength. Its flexural strength is comparable to most competitors and in line with ISO standards.

Initial LiSi Block has the same flexural strength whether polished or fired.



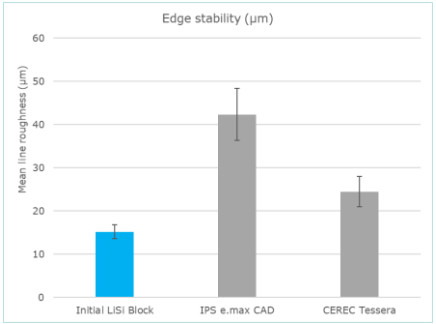
Source: GC R&D, Japan 2021. Data on file

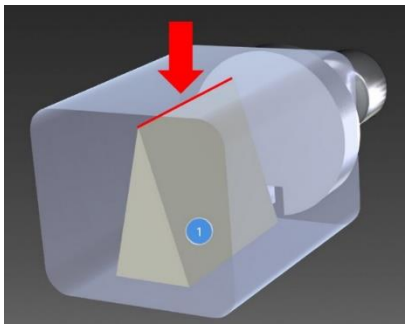
4.2 What is edge stability and why is it important?

Edge stability shows how resistant to breakage is a material especially at its borders. This is an important feature for this type of material, which naturally is designed to have a lot of edges. It is also important considering how thin the material can get in the edges. So when you polish before firing or when you polish as a final finishing, Initial LiSi Block does not break or its edges will not break/change. This is why edge stability is important.

Initial LiSi Block has the highest edge stability among its main competitors.

Edge stability[2)]

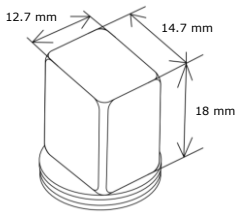




5 Packaging

5.1 Sizes and Dimensions

	Length	Width	Height
Size 14 (mm)	18	14.7	12.7



5.2 In which shades is Initial LiSi Block available?

High Translucency (HT):

- A1, A2, A3, A3.5, B1

Low Translucency (LT):

- A1, A2, A3, A3.5, B1

Bleach

5.3 What is the shelflife of Initial LiSi Block?

10 years from date of manufacture

5.4 How should I store Initial LiSi Block?

Recommended for optimal performance, store at room temperature (4-25ºC / 39.2-77.0ºF) away from direct sunlight and high humidity.

5.5 What is the price of Initial LiSi Block?

Price List is valid as of 1st October 2021 Prices in EURO - V.A.T. excluded

CEREC			
Shade	**Size**	**Ref.**	
A1 HT	14	12576	10004844
A2 HT	14	12577	10004956
A3 HT	14	12578	10004957
A3.5 HT	14	14556	10037273
B1 HT	14	12580	10004886
A1 LT	14	12581	10004887
A2 LT	14	12582	10004958
A3 LT	14	12583	10004888
A3.5 LT	14	14557	10037274
B1 LT	14	12586	10004889
Bleach	14	14558	10037275
PRICE	€118.3		
Price per block	€23.2		

6 Clinical application

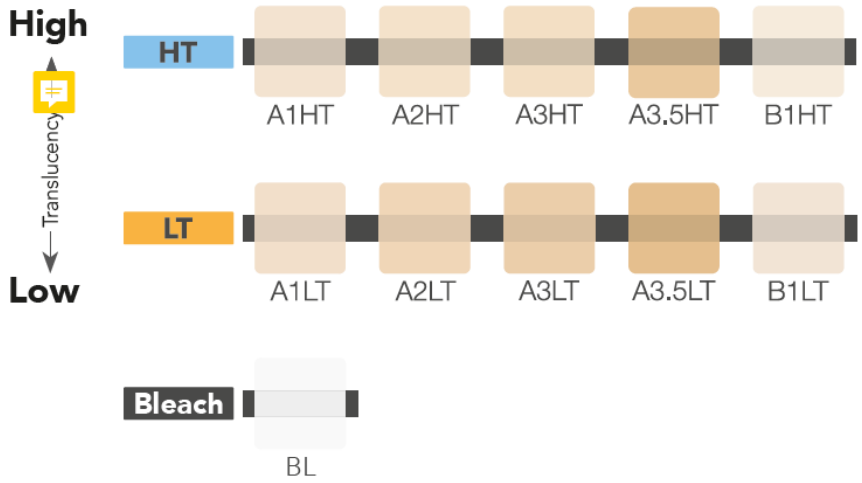
6.1 How do I select the right shade?

High Translucency (HT):

- A1, A2, A3, B1
- mainly to replace enamel
- e.g. in cases of inlays, onlays, veneers, partial and full crowns

Low Translucency (LT):

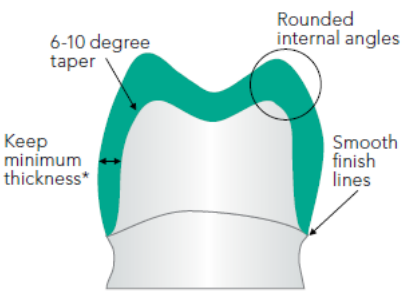
- A1, A2, A3, B1
- for replacement of dentin + enamel structures
- e.g. to mask discoloured preparations, in particular for crowns

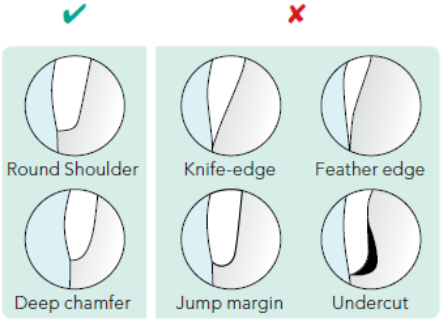


6.2 Can I take the shade by using the colour of the block before milling?

The restoration colour will look different depending on the thickness and firing condition. Please consider the colour of the block before milling as a guide.

6.3 Preparation Design





6.4 Preparation Design

Minimum thickness of the restoration

- wall thickness >1.0 mm
- thickness at margins >1.0 mm
- pit and fissure areas >1.0mm
- cusp areas >1.0 mm

Margin preparation

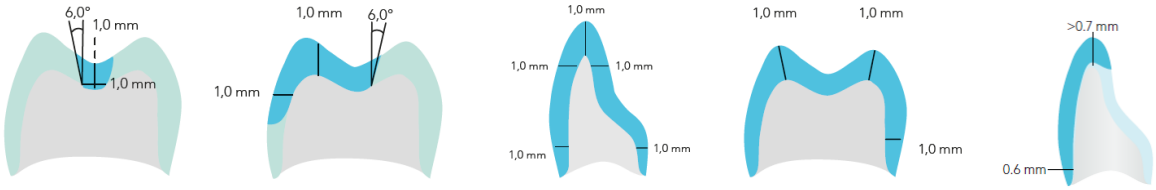
- deep chamfer or rounded shoulder

Preparation angle

- Prepare tooth with about 6° angle

Inlays and onlays

- all internal edges and angles should be rounded
- avoid having margins in direct occlusal contact with the opposing tooth



Q3. How can the accuracy of the fit be adjusted?
If it is needed to increase the incisal edge, it is recommended to do so by using Lustre Pastes ONE. If there is a need to lower the incisal edge this can easily be done with the help of a diamond bur.

6.5 Scanning and Milling with CEREC

6.5.1 How to scan and mill the restoration effectively?

- Scan the preparation and design the restoration
- Select the Initial LiSi Block milling program
- Mill the restoration
- After milling, check the restoration for
  - Discolorations linked to the milling process
  - Outbreaks
  - Cracks

6.5.2 Which milling burs should I use on a CEREC device?

- Step Bur 12 in combination with Cylinder Pointed Bur 12S
- Step Bur 12S in combination with Cylinder Pointed Bur 12S
  - The Extra Fine grinding option is not available for this material.

6.5.3 Which software update on CEREC should I use to mill Initial LiSi Block restorations?

Integration into CEREC software (chairside)

- Software version MP CEREC 4.6.1, MP CEREC CAM 4.6.1:

    - Download for free the separate material pack:
- https://www.dentsplysirona.com/de-de/produkte/cad-cam/praxis/downloads.html or https://my.cerec.com/de-de.html
- All later CEREC software versions will have integrated the blocks accordingly by default.

Integration into inLab software (labside)

- Software version MP inLab CAM 18.1
    - Download for free the separate material pack:
    - https://www.dentsplysirona.com/en/explore/lab/cad-cam-equipment-dental-lab/downloads.html

- All later inLab software versions will have integrated the blocks accordingly by default.

6.5.4 What if I did not upload the latest software update with Initial LiSi Block ? Which program can be used?

There are no recommendation of alternatives by Sirona.
However, the Initial LiSi Block program has been optimized for its most correct and efficient milling. There have been set individual milling parameters for the milling of Initial LiSi Block which are only implemented in this specific Initial LiSi Block milling program based on an internal Sirona evaluation process. Using other milling strategies will impact the milling outcome, speed and the longevity of your burs.

6.6 Scanning & Milling – other devices

6.6.1 Can Initial LiSi Block be dry milled?

Initial LiSi Block cannot be dry milled. As a ceramic material it should be milled only in wet conditions.

6.7 Which CAD/CAM devices have an integrated Milling strategy

At the end of August 2021, the following devices will have integrated Initial LiSi Block onto their Softwares:

Authorized CAD/CAM devices for GC materials				
Manufacturer	Device	CERASMART270	Initial LRF	Initial LiSi Block
Dentsply Sirona	CEREC MC	update 4.6.1	update 4.6.1	update 4.6.1
Dentsply Sirona	CEREC MC X	update 4.6.1	update 4.6.1	update 4.6.1
Dentsply Sirona	CEREC MC XL	update 4.6.1	update 4.6.1	update 4.6.1
Dentsply Sirona	inLab MC L/XL	update 16.1	update 16.1	update 16.1
Dentsply Sirona	inLab MC X5	update 16.1	update 16.1	update 16.1
Dentsply Sirona	PrimeMill	update 5.1.3	update 5.1.3	update 5.1.3
Zirkon Zahn	M1 Wet Heavy Metal	6927 and higher	6927 and higher	6957 and higher
Zirkon Zahn	M1 Wet	6927 and higher	6927 and higher	6957 and higher
Zirkon Zahn	M4 Wet Heavy Metal	6927 and higher	6927 and higher	6957 and higher
Imes Icore	ALL, but 250i dry	CAD-Dental Designer, CAM V5 smart	CAD-Dental Designer, CAM V5 smart	CAD-Dental Designer, CAM V5 smart
VHF	Z4	DentalCAM 7.06.00	DentalCAM 7.06.00	DentalCAM 7.06.00
Roland	DWX - 4W	Hyperdent & Millbox 4.3	Hyperdent	WorkNC & Millbox 5.1.1
Amann Girrbach AG	Ceramill Motion II	Use the Cerasmart strategy	Not available	Not available
Ivoclar Vivadent	Programill	Not available	Not available	Not available
Planmeca	Planmill	Available	Not available	Not available

*milling strategies are available starting at the update number on the table.
For all later updates the milling strategies are automatically incorporated

6.8 Finishing

6.8.1 Does Initial LiSi Block require a firing process?

Firing is not needed since Initial LiSi Block is a fully crystallized block. Thanks to the HDM technology and the very fine glass particles inside, the polishing of Initial LiSi Block can be achieved in very few steps.

6.8.2 How do I polish Initial LiSi Block?

1. Grind off the connector and trial fit the restoration
2. Use a diamond disk to roughen the surface (1)
3. Use medium silicone point (2)
4. Use fine silicone point (3)

5. Use a goat's hair wheel or a diamond paste such as DiaPolisher Paste for high gloss (4)
6. Final result

The above pictured polishing wheels are an example. Polishing burs from various manufacturers can be used.
Depending on the surface and the desired structure a combination of conic (coarse), round (medium) and twist (fine) wheels can be used. Alternatively, on step 5 Diapolisher Paste can be used.

The following bur sets have been tested and validated for providing an optimal polishing: EVE Diapol 3 Step System, Meisinger Lustre for Porcelain Intraoral Kit, Carsten Fischer Panther kit.

6.9 I want to have better aesthetic results. How can I paint Initial LiSi Block?

For glazing, staining and layering, use our dedicated GC Initial Lustre Pastes ONE, Initial Spectrum Stains and GC Initial IQ SQIN micro-layering ceramic for the best aesthetic results. Please respect the firing recommendations for each of these characterizing solutions in order to not compromise the final result.

Before applying Lustre Paste ONE, the ceramic restoration is shaped and contoured using adjusted diamond burs.

6.9.1 How should I prepare my framework before starting to paint?

The following minimum thicknesses refer to the wall thicknesses of the monolithic GC Initial LiSi Block restorations. They are the same as for a manual preparation because the painting solutions are very thin and will not impact the overall fit.

Minimal thickness of Initial LiSi Block Framework for the Staining Technique			
Indications		Incisal/Occlusal	Wall Thicknes
Occlusal Veneer		1,0	1,0
Veneer		0,7	0,6
Inlay		1,0 fissure depth	1,0 Isthmus width
Onlay		1,0 fissure depth	1,0 Isthmus width
Anterior Crown		1,5-1,2	1,0
Posterior Crown		1,5	1,0

6.9.2 What is the exact procedure to use Lustre Paste ONE?

- Clean and dry the restoration after the trial fit.
- Use tweezers to hold the restoration.
- Take the desired Initial Lustre Paste ONE shade and place it on the mixing pot.
- Adjustment of Luster Paste consistency
    - Discard one or two drops of the Diluting liquid onto the mixing pot and mix it with Initial Lustre Paste to reach the desired consistency of the shade.
    - The desired consistency should be one that is not too thick, but also not too flowable. Otherwise it can be difficult to control it.
    - A very thick consistency can have a negative impact on the surface smoothness and a very thin consistency can lead to insufficient gloss or shade adjustment.

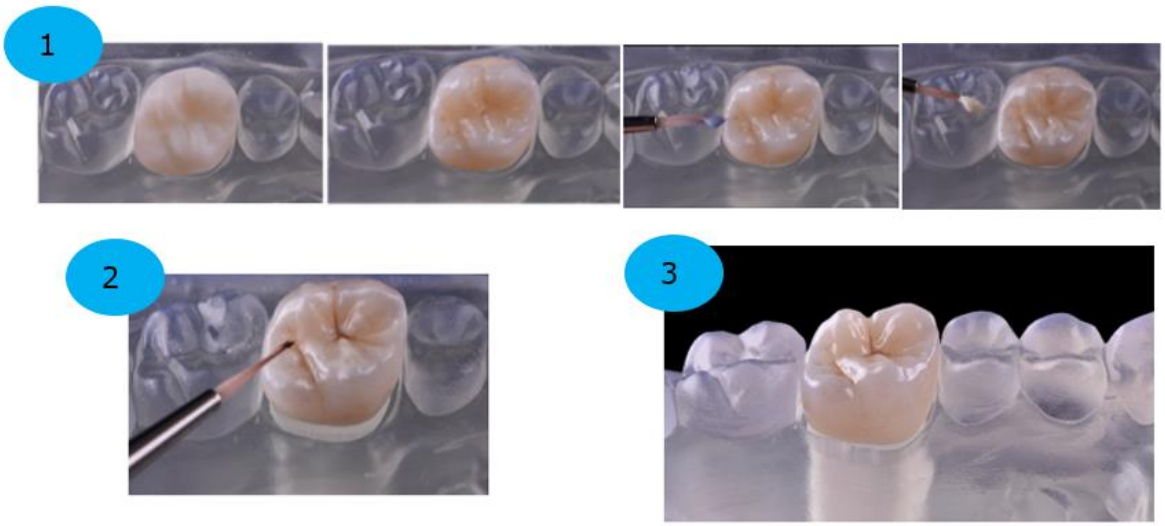
- The Lustre Paste ONE Neutral FLUO is coated on the entire surface of the restoration. This coating is clearly thicker than what we know from a normal glaze firing.
- Apply the Lustre Pastes directly onto the restoration until the desired outcome is achieved.
    - Always start by applying L-NFL for a general glaze (Fig.1).
    - Continue with applying L – Opal for opalescence in the interproximal walls (Fig.2).
    - For increased chroma apply L- A cervically (Fig.3).
    - L- White can be applied for a white effect (Fig.4)
    - Finish with L- Light Grey to add translucency in the incisal area (Fig.5).
- Place into the furnace and follow the firing recommendations, as in section 5.4.
- If grinding adjustments are required, make sure that no overheating of the ceramic occurs.
- Final result with 5 shades of Lustre Paste (Fig.6)

6.10 When do I apply Lustre Pastes ONE in combination with Spectrum Stains?

If more definition and deeper characterization is desired, use the extended range of Lustre Pastes ONE in combination with Spectrum Stains. The latter are more intense in color and can be more useful when it is needed to add a bit of 2D effect, for example for fissures or white spots. In these cases the combination of these two different painting options is the best.

6.10.1 What is the exact procedure to use Lustre Paste ONE with Spectrum Stains?

- Proceed in the same way as in steps 1-5 in the above case (Fig.1).
- Then use the SPS Brown to paint fissure effects onto the molar restoration (Fig.2).
- Place in the oven and fire according to recommended settings.
- If grinding adjustments are required, make sure that no overheating of the ceramic occurs.
- The outcome (Fig. 3)



6.10.2 How can I dilute (adapt the consistency of) the Lustre Pastes ONE?

Use the Lustre Pastes ONE Diluting Liquid to adapt the consistency. Do NOT use water to dilute. Lustre Pastes ONE may not come in contact with water.

6.10.3 What can I do when the consistency of the Lustre Pastes ONE is too dry?

Use the Refresh Liquid to recover the Lustre Pastes ONEin case of dryness.

6.10.4 How do I change the texture of the Lustre Pastes ONE?

The requested surface texture/smoothness of the Lustre Pastes ONE layer can be changed by soft vibration or condensing the applied pastes.

6.10.5 What should I do when sufficient gloss was not achieved after staining and glazing?

When sufficient gloss is not achieved, please adjust the firing temperature and holding time. If the firing temperature is too high, color will appear more whiteish and color adjustment by staining will be needed**.** When the Lustre Pastes ONE are heavily diluted or applied in a too thin layer the glossy effect is tempered, so apply a thicker layer/dilute less the pastes.

6.10.6 Can I apply more than one layer of Lustre Pastes ONE?

Yes, you can do further firings, keeping the same firing temperatures.

6.10.7 Can I mix the Lustre Pastes ONE with other Initial powders?

You can use the GC Initial Spectrum Stain powders with moderation to intensify the Lustre Pastes ONE. Mix the required amount of stain powder with the Diluting Liquid and mix it with the required Lustre Paste ONE or directly mix the stain powders with the Lustre Paste Neutral FLUO.

6.10.8 Are the Lustre Pastes ONE sufficiently resistant to abrasion?

Yes, the Lustre Paste ONE are a special mixture of different types of low fusing ceramic particles, stains & glaze mixture which is resistant to abrasion.

6.11 What is IQ SQIN and the concept of micro-layering?

When form and texture for outstanding aesthetics is desired, it is possible to add Initial IQ SQIN into the procedure of painting, as part of the SQIN concept. Thanks to the refined mixture of feldspar-based glasses in Initial IQ SQIN, a lifelike three-dimensional effect is created, bringing color depth and lifelike translucency to your restorations in a very fast way and with minimum workload. Simply apply the SQIN ceramic on top of the previously fired individualized Lustre Pastes ONE surface and you will obtain a convincing 3D aesthetic result that can hardly be distinguished from a conventional multilayered ceramic veneered restoration.

6.11.1Why do I need the Form & Texture Liquid?

In combination with the dedicated Form & Texture Liquid, Initial IQ SQIN offers unique application and modelling properties allowing individual surface texture. Furthermore, the mixture of the Form & Texture liquid and the SQIN powders results in a highly compact and dense ceramic slurry with self-glazing properties after ceramic firing.

6.11.2 Is there a dedicated framework design for Initial IQ SQIN?

The monolithic base must be designed for micro-layering of the buccal area. Current modeling software systems allow to create a buccally reduced shape in no time. You can achieve lifelike color depth and naturally translucent effects already from a buccal space of approx. **0.2 mm to 0.6 mm**.

Once milled, the restoration can be shaped and contoured using dedicated instruments. Initial Lustre Pastes ONE are then used as a color & individualization layer assuring a perfect connection firing before the application of the SQIN in the micro-layering technique. The SQIN ceramic can be applied in a **layer thickness of 0.1 - 0.6 mm** over the painted and fired onto Lustre Pastes ONE surface.

6.11.3 How do I achieve form & texture using GC Initial IQ SQIN?

The SQIN ceramic is applied, covering the entire buccal surface and completing the final outer form of the restoration. A dedicated range of SQIN ceramics is available.

- Enamel (E-57 to E-60)
- Dentin Body (A-D)
- Translucent Opal Booster (TO)
- Bleach Dentin (BL-D) & Enamel (BL-E)
- Gum (Light – Dark –Neutral)

Using the SQIN ceramic in combination with its dedicated special mixing liquid (Form & Texture Liquid) assures a very comfortable application, an easy forming of your final shape as well as an easy to mimic texture. The SQIN ceramic require a separate firing



6.11.4 How reliable is IQ SQIN in the long run?

After the final firing, a so called "self-glazing effect" is easily obtained.
Thanks to its high homogeneity, the SQIN ceramic remains very stable during its application and shows hardly any shrinkage after firing. It is no longer needed to correct shape and texture. The convincing, natural end-result is achieved in just one SQIN firing!

6.11.5 Can I layer Initial LiSi Block with porcelain?

No, Initial LiSi Block cannot be layered with porcelain. Difference in thermal expansion between porcelain and Initial LiSi Block may cause internal microcracks. However, it is possible to micro-layer with our Initial IQ SQIN ceramic.

6.11.6 Which one do I apply first, IQ SQIN or Lustre Paste ONE?

Lustre Paste ONE is the first to be applied, because this is what defines the color of the restoration. IQ SQIN gives form and texture but will not change the color.

7 Firing Instructions

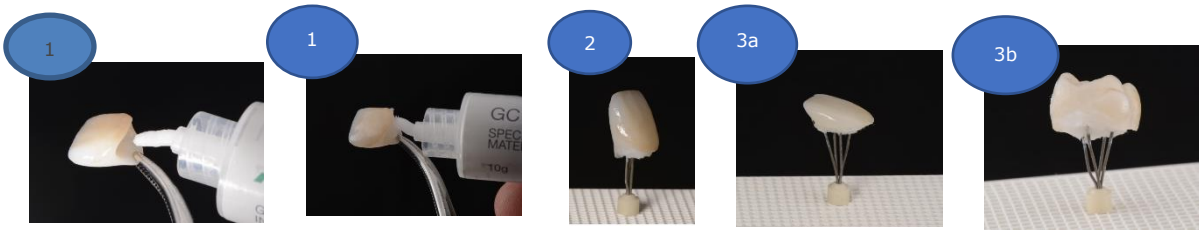
7.1 What is a firing Foam and do I need it?

The firing foam is used to connect the pin with the restoration. Correct application is important for an efficient procedure. Faulty application can heavily impact the aesthetic result so recommendations should be respected.

7.1.1 Does the firing foam dry out?

For an optimal performance it is recommended to close the syringe to ensure an airtight seal. Store in a cool and dry place.

7.2 How do I place the restoration correctly in the furnace?



- Apply FIRING FOAM directly from the syringe into the crown or onto the pressed ceramic restoration (Fig 1a & 1b)
- Carefully place the ceramic restoration on the pin of the ceramic firing tray (Fig 2)
- Please note the correct pin placement for an anterior and a posterior restoration as illustrated in the pictures above (Fig 3a & 3b). Smaller restorations (veneers, inlays, onlays) do not need to be entirely supported.

Recommendations

- When firing, do not heat or cool the restorations quickly. Rapid change in temperature could break the material.
- When firing, proper furnace tray (honeycomb tray) and support pin (in combination with the GC Initial Firing Foam) should be used.
- After firing, quickly remove the solidified FIRING FOAM under running water with an instrument
- Allow the restoration to cool to room temperature in a place protected from draft

7.2.1 If the firing foam has touched the outer surface how can I clean it?

The surface can be easily cleaned with a brush.

7.3 Which temperature should I use to fire Initial LiSi Block?

		Preheating Temperature	Drying Time	Raise of Temperature	Vacuum	Final Temperature	Holding Time
Characterization and glazing	GC Initial Lustre Paste ONE	450°C	2 min	45°C/min	YES	730 - 750°C	1 min
	GC Spectrum Stains	450°C	2 min	45°C/min	YES	730 - 750°C	1 min
	GC Initial IQ SQIN	400°C	4 min	45°C/min	YES	750 - 760°C	1 min

7.3.1 What if I use the wrong temperature?

Indicated temperatures assure an optimal connection firing. Higher temperature than the firing instruction may result in a change of the color of your restoration (higher value).

7.3.2 Can I fire both Lustre Paste ONE and Spectrum Stains at the same time?

The Lustre Pastes ONE are fired with vacuum. When required, Spectrum Stains can be used and fired at the same time.

7.3.3 How long does it take for IQ SQIN to dry?

Drying process of Initial IQ SQIN takes minimum 4 minutes. Closing of firing chamber takes 4 minutes. For thicker layers an equal prolonging of drying time shall be applied.

7.3.4 How many times can I fire?

An extra glaze firing and further individualization with Lustre Paste ONE and/or Spectrum Stains & Glaze is possible using the same firing schedule as your last SQIN firing. You can fire multiple times, but please note there will be an increase in value of the Initial LiSi block restoration.

8 Cementation

8.1 How do I lute Initial LiSi Block restorations?

Lute with an adhesive resin cement (such as G-CEM LinkForce, G-CEM Veneer) or a self-adhesive universal resin cement (such as G-CEM ONE). The latter is the preferred option.
Note:

- Prior to using CERAMIC PRIMER II, G-Multi PRIMER, G-CEM LinkForce, G-CEM ONE or G-CEM Veneer, refer to the respective instructions for use.
- In case the preparation is non-retentive, G-CEM ONE in combination with G-CEM ONE ADHESIVE ENHANCING PRIMER or G-Premio BOND is preferred.

Indications		Recommendation		
		Dual-cure adhesive resin G-CEM LinkForce 	Self- adhesive resin G-CEM ONE 	Light-cure adhesive resin G-CEM Veneer 
Veneers			 With Adhesive Enhancing Primer	 < 2 mm
Inlays/Onlays			 With Adhesive Enhancing Primer	 < 2 mm
Crowns				

8.2 How do I pre-treat an Initial LiSi Block restoration?

Initial LiSi Block can be pre-treated with hydrofluoric acid gel (5-9%) for 20 seconds. Sandblasting of the restoration is not recommended because it may create micro-fractures within the matrix and possibly cause a restoration failure.

To clean the restoration it is recommended to use phosphoric acid (35-37%), preferably scrubbing with a microbrush for 10-15 seconds.

Initial LiSi Block can be primed with a silane containing primer such as G-Multi Primer. This primer conditions all other ceramic and non ceramic restorations and it is ideal to have in your arsenal of indirect procedures.

8.2.1 Can I sandblast the inner surface of Initial LiSi Block?

This is against recommendations, because it can damage the inner surface resulting in deterioration of mechanical properties.

8.3 Cementation with G-CEM ONE & AEP

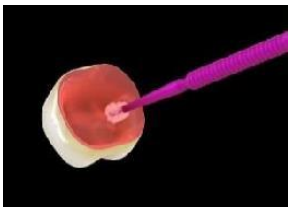
Cementation technique for inlays, onlays, veneers and crowns.

1. Clean, rinse and thoroughly dry the prepared tooth.

Optional

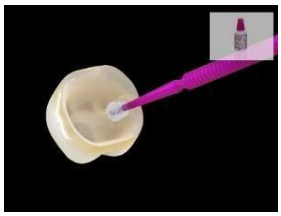



2. **When more adhesion is needed**, apply G-CEM ONE ADHESIVE ENHANCING PRIMER, wait 10 seconds, and dry with MAXIMUM air pressure for 5 seconds to prevent liquid pooling in the gingival sulcus. Do not light cure.



3. Apply hydrofluoric acid gel (5-9%) for 20 seconds to the inner surface

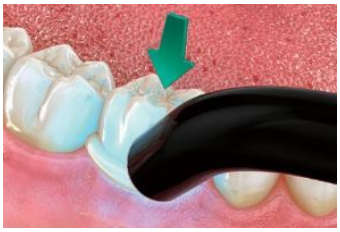
4.Wash with water spray or an ultrasonic cleaner and dry.



5. Condition the etched surfaces with a **silane coupling agent** (such as or G-Multi PRIMER) and allow it to dry.

6. Place the mixing tip and extrude the material directly into the restoration.

7. Seat immediately and maintain moderate pressure. Working time is 2'45" at 23℃.



8A. Tack cure by waving the light guide of a curing light over the excess cement for 1 second until it reaches a rubbery consistency.

or

8B. Keep moderate pressure until it reaches a solid rubbery consistency.

9. Remove excess cement while maintaining moderate pressure.

10A. While maintaining moderate pressure, light cure all surfaces / margins.

or

10B. Let the material set for 4 minutes in case restoration does not let the light to pass through.

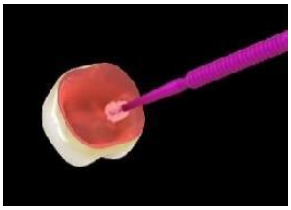
8.4 Cementation with G-CEM ONE & G-Premio BOND

Cementation technique for inlays, onlays, veneers and crowns.

1. Clean, rinse and thoroughly dry the prepared tooth.

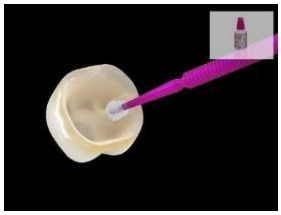
Optional

2. **When more adhesion is needed**, apply **G-Premio BOND**, wait 10 seconds, and dry with MAXIMUM air pressure for 5 seconds to prevent liquid pooling in the gingival sulcus and **light-cure**.



3. Apply hydrofluoric acid gel (5-9%) for 20 seconds to the inner surface

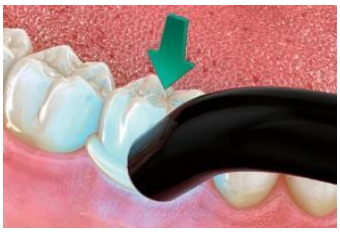
4.Wash with water spray or an ultrasonic cleaner and dry.



5. Condition the etched surfaces with a **silane coupling agent** (such as or G-Multi PRIMER) and allow it to dry.

6. Place the mixing tip and extrude the material directly into the restoration.

7. Seat immediately and maintain moderate pressure. Working time is 2'45" at 23℃.

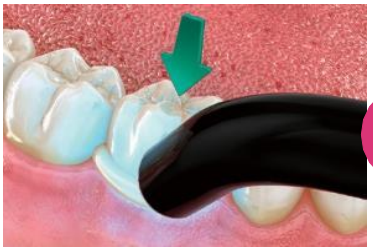


8A. Tack cure by waving the light guide of a curing light over the excess cement for 1 second until it reaches a rubbery consistency.

or

8B. Keep moderate pressure until it reaches a solid rubbery consistency.

9. Remove excess cement while maintaining moderate pressure.



10A. While maintaining moderate pressure, light cure all surfaces / margins.

or

10B. Let the material set for 4 minutes in case restoration does not let the light to pass through.

8.4.1 How can I take care of the restoration?

Your new restorations do not require special care but remember that they do not prevent tooth decay or gum disease from occurring. Therefore, good oral hygiene should be maintained.

8.5 Repair of Initial LiSi Block restorations

If an Initial LiSi Block restoration needs to be repaired this can be done using IQ SQIN, the micro-layering ceramic. This can be done for form and texture adaptations. However, the micro layer cannot exceed the 0.6mm in total.

If repairs in color need to be made, then Initial Lustre Paste ONE can be used. This can be fired multiple times.

9 Comparison of GC blocks

9.1 What are the main differences of Initial LRF vs. CERASMART270 vs. Initial LiSi Block

	Material	CERASMART270	Initial LRF	Initial LiSi Block
Physical properties	Flexural Strength	279 MPa	210-250 MPa	408 MPa
	Posterior Indications	+	++	+++
	Elastic Modulus	9.6 GPa	-	-
	Elasticity/ Buffering masticatory forces	+++	+	-
	Preventing Wear of Antagonist	+++	++	+
Aesthetics	Aesthetics	++	+++	+++
	Anterior Indications	+	+++	+++
	Characterisation Options	Optiglaze Color	Glaze + Spectrum Stains	Lustre Paste One
Handling	Milling Ability	+++	+++	+
	Repair	+++	+	+
	Polishability	+++	+++	+++
	Fast processing	+++	+++	+

9.2 When are the 3 products best indicated?

	CERASMART270	Initial LRF	Initial LiSi Block
Veneers	+	+++	++
Anterior Crown	+	+++	+++
Crown on Premolars	+++	++	+++
Crowns on Molars	++	+	+++
Inlay/Onlay	+++	+	+++
Overlay	+++	+	+++
Hyperfunction & Bruxism	+++	-	++
Palatal Veneer	+++	+	++
General Tooth Wear	+++	+	++
Implant Supported Restoration	+++	-	+