

Natural beauty restored  
in one appointment



*initial*<sup>™</sup>  
LiSi Block

Lithium Disilicate  
CAD/CAM Block for  
chairside solutions

AUGUST 2021



Since 1921  
100 years of Quality in Dental



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# 1. The material and its advantages

Initial LiSi Block is a fully crystallized lithium disilicate block that delivers optimal physical properties without firing. This unique block features the proprietary HDM (High Density Micronisation) technology for CAD/CAM dentistry to deliver high wear resistance, smooth margins and aesthetic final results. This makes it an ideal, time saving solution for single visit chairside treatments or for one appointment indirect restorations.

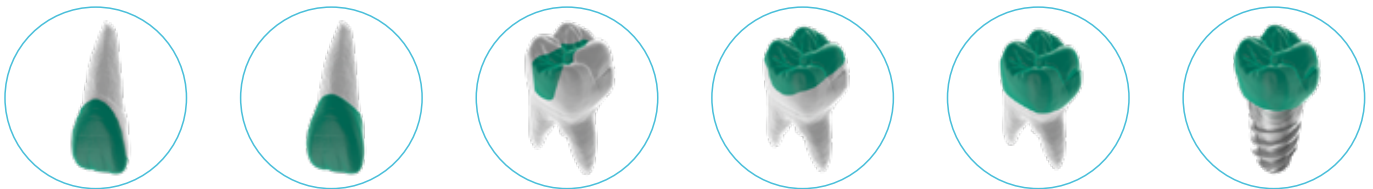
- Unique, strong and fully crystallized lithium disilicate block
- Save time, as no firing is required
- High flexible processing pathway: offering either to finish with polishing or to stain & glaze
- Excellent marginal adaptation for a seamlessly fit to the tooth
- Optimized strength for low chipping
- Optimized acid and wear resistance to help preserve the aesthetic of your restorations over time
- Natural opalescence for lifelike aesthetics
- Translucency to optimize blending in restoration and masking of strongly discolored abutments

PROPERTIES	UNIT OF MEASURE	MEAN VALUE
Material composition	Lithium disilicate	
Linear thermal expansion CTE (25 - 500 °C)	10 <sup>-6</sup> /K	10.3
Biaxial Flexural Strength	MPa	408
Chemical Solubility	µg/cm <sup>2</sup>	2.9
2-body wear (of material)	µm	1
2-body wear (of antagonist)	µm	6
Vickers hardness	HV	644

## 2. Indications & general guidelines

### 2.1. Indications

- Veneers
- Crowns
- Inlays
- Onlays
- Partial crowns
- Crown or splinted crown on top of an implant abutment



### 2.2. General procedure guidelines

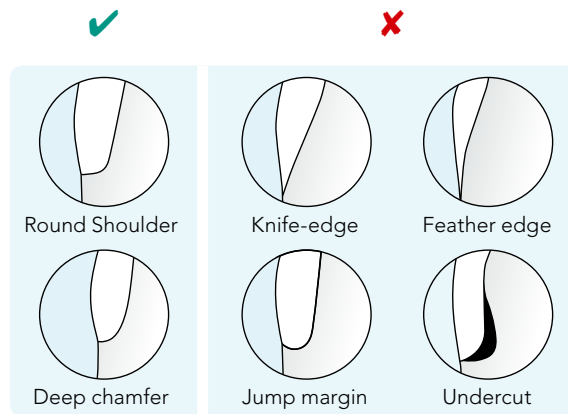
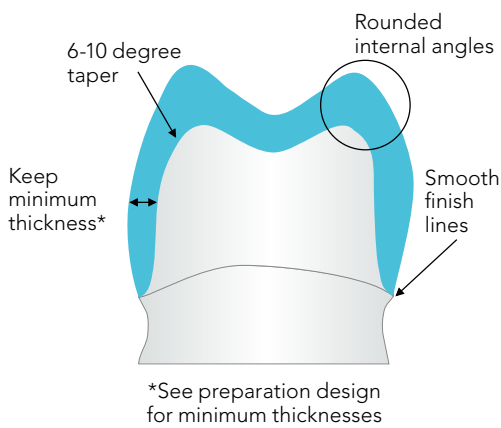
Please note that the following observations should always be respected to guarantee a successful procedure with Initial LiSi Block:

- The minimum wall thickness should always be respected.
- The blocks should always be milled using the recommended strategy from the machine manufacturer. Please refer to the respective instructions of the milling unit. Blocks can be processed with authorized CAD/CAM systems.
- Please follow the manufacturer's instructions for use for the materials of glazing and staining.
- When firing, do not heat or cool the restorations too quickly. Rapid change in temperature could break the material.
- Finish and polish using suitable grinding instrument, low rotation speed and light pressure.
- Pay attention to margins and contact points when polishing the restoration.
- Overheating of the glass-ceramic must be avoided.
- Clean the restoration before cementing.
- Sandblasting is not recommended and must be avoided.

### 3. Preparation design

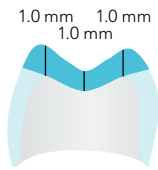
A good and long lasting restoration is one that has been designed in an efficient way. This is why it is very important to respect the guidelines for a correct design. The minimum wall thickness must be still ensured after all manual adjustments have been made. Proper reduction of the hard tissue of the tooth during preparation is essential for maximizing the strength, the shade and the retention of the finished restoration.

#### Preparation guidelines for all-ceramic restorations



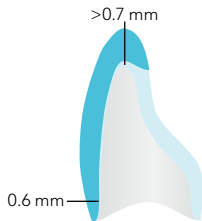
- Prepare margins with deep chamfer or rounded shoulder.
- Avoid having margins in direct occlusal contact with the opposing tooth.
- Antagonist contacts must be taken into consideration.
- The incisal edge of the preparation should be at least 1.0 mm (milling tool geometry) in order to permit optimal milling during CAD / CAM fabrication.

**Occlusal veneer**



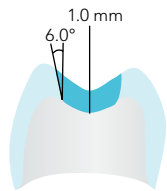
- Reduce the anatomical shape and observe the stipulated minimum thickness.
- Reduce the incisal crown third – in the occlusal area by approx. 1.0mm.

**Veneer**



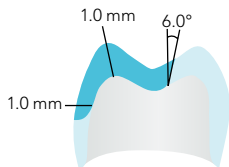
- If possible, the preparation should be located in the enamel.
- Reduction in the cervical and / or labial area by 0.6 mm, and the incisal edge by 0.7 mm

**Inlay**



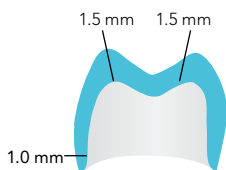
- A preparation depth of at least 1.0 mm and an isthmus width of at least 1.0 mm must be observed in the fissure area.
- Do not prepare undercuts.
- Ensure that the cavity walls form an angle of 6° with the long axis of the tooth.
- All internal edges and angles should be rounded.

**Onlay**



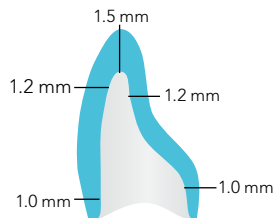
- Reduce the anatomical shape and observe the stipulated minimum thickness.
- Width of the shoulder / chamfer should be at least 1.0 mm.
- Reduce the incisal crown third – in the occlusal area by approx. 1.0 mm.

**Posterior crown**



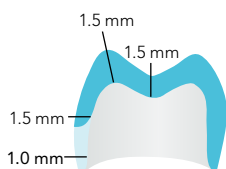
- Reduce the anatomical shape and observe the stipulated minimum thickness.
- Width of the shoulder / chamfer should be at least 1.0 mm.
- Reduce the incisal crown third – in the occlusal area by approx. 1.5 mm.

**Anterior crown**



- Width of the shoulder/chamfer at least 1.0 mm.
- Reduce the incisal edge by approx. 1.5 mm.
- Reduce the vestibular and / or oral area by approx. 1.2 mm.

**Partial crown**



- Provide at least 1.5 mm of reduction in the cuspal area.
- Width of the shoulder / chamfer should be at least 1.0 mm.



## 4. Shade selection

The shade line up of Initial LiSi Block is very intuitive, especially because the material is fully crystallized. All shades match with the V-Classic\* shades for a perfect shade integration. Two levels of translucency are available, depending on the individual requirements for each case.



TRANSLUCENCY CHOICE	
HIGH TRANSLUCENCY (HT)	LOW TRANSLUCENCY (LT)
<ul style="list-style-type: none"> <li>• <b>Thinner</b> preparations</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Thicker</b> restorations</li> </ul>
<ul style="list-style-type: none"> <li>• <b>Normal color</b> of the abutment</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Discolored</b> or <b>metal</b> abutments</li> </ul>
<ul style="list-style-type: none"> <li>• Optimal <b>blending</b> effect</li> </ul>	<ul style="list-style-type: none"> <li>• Optimal <b>masking</b> effect</li> </ul>
<ul style="list-style-type: none"> <li>• In combination with a <b>light-cure</b> or <b>dual cure</b> luting agent</li> </ul>	<ul style="list-style-type: none"> <li>• In combination with <b>dual cure</b> or <b>self-cure</b> luting agent</li> </ul>

Choice of translucency according to the indication

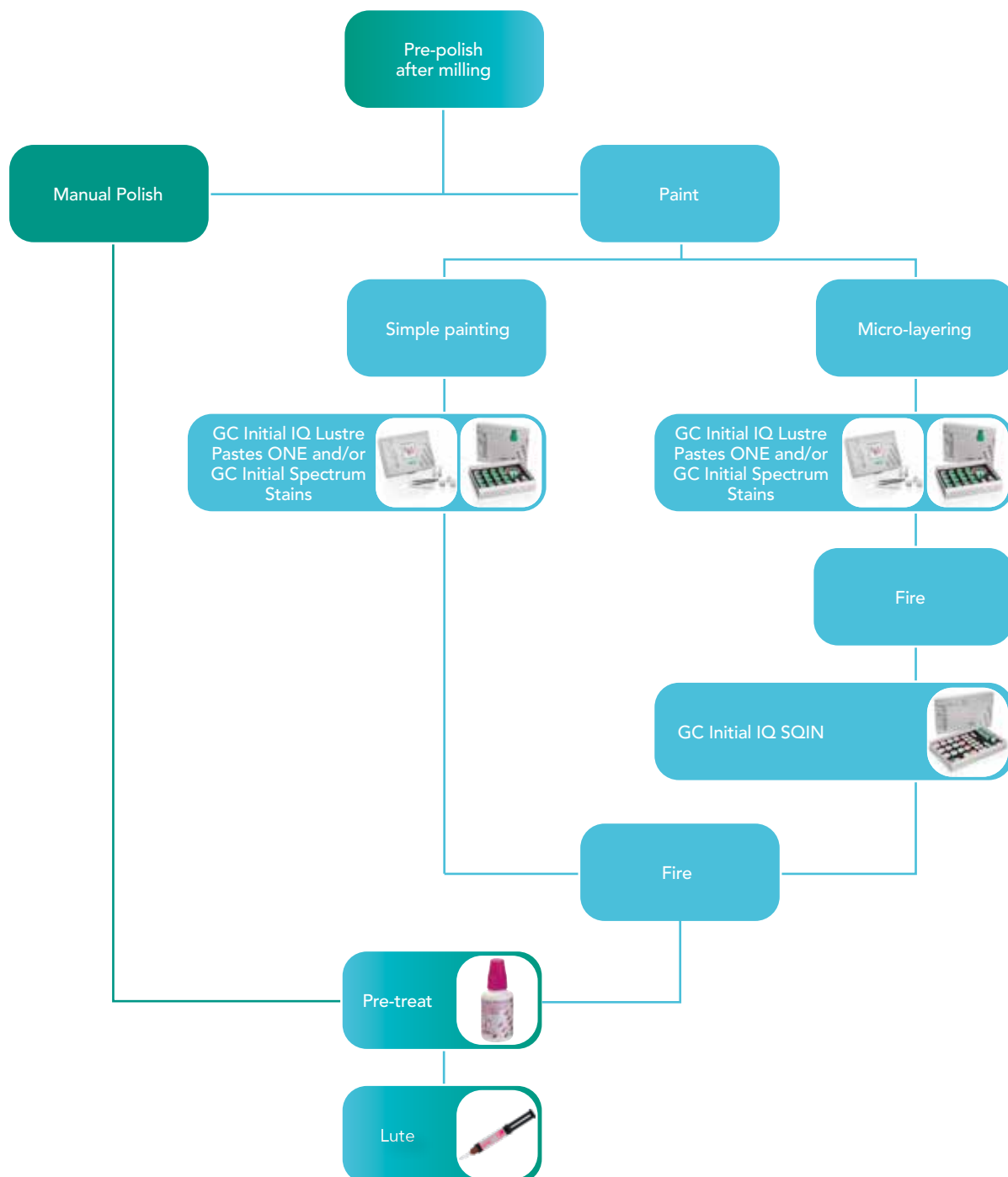
	Anterior crown	Posterior crown	Inlay	Onlay	Veneer			
HT	👍👍	👍	👍👍👍	👍👍👍	👍👍👍	👍	👍👍	👍👍👍
LT	👍👍👍	👍👍👍	👍👍	👍👍	👍	Indicated	Good indication	Best indication

\*V-Classic are VITA shades. VITA is not a trademark of GC



## 5. Finishing

Initial LiSi Block has a very smooth microstructure, contributing to its aesthetic appearance. Using this unique composition, it addresses all the needs of dentists, lab technicians and patients. Rather than only concentrating on the strength of the material, GC was able to develop a block that is very strong while achieving amazing marginal integrity, color vitality, opalescence, low wear, and easy polishability. With the correct polishing process, high gloss comparable to the gloss obtained with glazing and firing can be achieved. Glazing and firing takes more time but offers more characterization possibilities. Below is a decision map with the steps of finishing depending on your preferred mode.

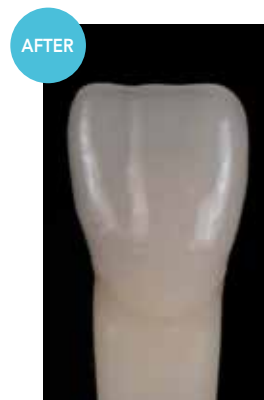


## 5.1. Manual Polishing

Thanks to the very fine crystal size achieved by HDM technology for CAD/CAM, the polishing of Initial LiSi Block can be achieved in very few steps. To have a good clinical result, it is important to select the correct grinding and polishing instruments for Initial LiSi Block. This ensures against eventual chippings in the margins or other issues that might arise if unsuitable instruments are used.

For an efficient polishing of Initial LiSi Block please refer to the following recommendations.

1. Remove the sprue (in picture 1, it is used a diamond disk), checking the occlusion and proximal contacts. Adjust contacts if necessary. Clean the restoration with ultrasound in water bath or steam cleaner.
2. Use coarse grained diamond instruments to smoothen the surface.
3. Continue with medium diamond polishers for pre-polishing. Avoid overheating the glass ceramic.
4. Proceed with the fine diamond polishers for polishing.
5. Finish the occlusal contact surfaces of the restoration with a goat's wheel and achieve high gloss.



- \* 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

## 5.2. Painting for 3D effects with GC Initial IQ Lustre Pastes ONE

Initial LiSi Block completes our large range of ceramics which has been a favorite among technicians for more than 17 years. For glazing and staining it is advised to use the dedicated SQIN concept with GC Initial IQ SQIN, GC Initial IQ Lustre Pastes ONE and GC Initial Spectrum Stains to achieve the best aesthetic results. Standard characterizing techniques are possible with Initial LiSi Block in combination with GC Initial IQ Lustre Pastes ONE. These 3-dimensional ceramic stains bring color depth and lifelike translucency in all your ceramic restorations and are in a ready-to-use consistency. Not only are they very intuitive, but they also offer a short firing time of less than 15 minutes.

These GC Initial IQ Lustre Pastes ONE represent a modern alternative for conventional staining and glazing, as well as for the colour, brightness, grey value and surface texture corrections of all of your ceramic crowns and bridges. Due to the unique Sandblasting is not recommended and must be avoided just a question of minutes to individualize the occlusal surface of your restoration or to paint on white bands, decalcifications, hair lines and crack lines. The optimal fluorescence ensures a very natural look of the tooth under all light circumstances. They can also be combined with GC Initial Spectrum Stains to increase individualization possibilities and to create some contrast effects.









On Initial LiSi Block restorations, the GC Initial IQ Lustre Pastes ONE and GC Initial Spectrum Stains can be used to

- Glaze and colour characterize of monolithic, full anatomical restorations
- Colour & individualize in a layer assuring a perfect connection firing before application of the SQIN ceramics in the micro-layering technique

### 5.2.1. Monolithic design for the staining technique

The following minimum thicknesses refer to the wall thicknesses of the monolithic 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 MONOLITHIC FOR THE STAINING TECHNIQUE			
INDICATION		INCISAL/OCCLUSAL	WALL THICKNESS
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 – 1.0	1.0
Posterior crown		1.5	1.0

The GC Initial IQ Lustre Pastes ONE are based on refined ceramic particles and can be applied in a thicker layer where they will exhibit unsurpassed vitality and a very natural glaze to your restorations.

Keep in mind: What you paint (on) is what you get (after firing)!

### 5.2.2. Description of the GC Initial IQ Lustre Pastes ONE shades

The below selection of 5 GC Initial IQ Lustre Pastes ONE shades is made to offer easy and simple characterizing solutions that cover most of your daily work, especially at chairside. The requested V-Classic Shade is created by a more or less intensive application of the GC Initial Lustre Pastes "Body A - D". This process, which only takes 2 minutes, is everything which is necessary to create V-Classic shades. All these shades also offer a natural fluorescence to the restoration.



L-NFL

**L-N: Lustre Neutral FLUO** – neutral and transparent base paste which can be mixed with all GC Initial IQ Lustre Pastes ONE.



L-A

**L-A : Lustre Body A** – base colour for all Vita Classic Shades A.

This selection of shades and liquids is also available in the Initial LiSi Block Aesthetic Kit



L-2

**L-W: Lustre Enamel Effect White** – pure white to paint on white spots or to increase value.



L-3

**L-LG: Lustre Enamel Effect Light Grey** – for small changes in value and to create a translucency effect on the incisal border.



L-Opal

**L-O: Lustre Enamel Effect OPAL** – to improve the opalescence.

Note:

- The GC Initial IQ Lustre Pastes ONE can be applied in one single or in multiple firing stages, allowing a flexible and individual way of working. This coating is clearly thicker than what we know from a normal stain/glaze firing.
- All GC Initial IQ Lustre Pastes ONE can be mixed together to obtain individual mixes.
- They may not come in contact with water.
- It is advised to softly sandblast the fired GC Initial Lustre Paste surface with 50 microns Alu-Oxid at max. 1.0 bar pressure before applying of the SQIN ceramic.



**Diluting Liquid** – a special liquid to change the flowability of the GC Initial Lustre Pastes.

For best results it is recommended to obtain a gel/ like consistency of the GC Initial Lustre Pastes.



Note:

- When needed, dilute the desired amounts of the pastes in a separate plate with Diluting Liquid, never dilute directly in the jars.
- If the Lustre Pastes are too diluted, the result is a reduction in the gloss of the paste after the firing; hence, the desired result may not be achieved in one glaze firing.



**Refresh Liquid** – used to preserve the thixotropic properties of the pastes. This liquid is used to recover dried out pastes to an optimum, gel like consistency without changing the physical properties. The Refresh Liquid can be used in the jars or mixed on a separate plate.

Important: Please shake the Refresh Liquid well before use!

### 5.2.3. Recommendations for shade application

In the below illustration is demonstrated a simple step by step for the characterization of an Initial LiSi Block restoration. The respective colors represent the GC Initial Lustre Paste ONE shades to be applied in the selected area.

White: Lustre Neutral FLUO (L-NFL)

Red: Lustre Paste A (L-A)

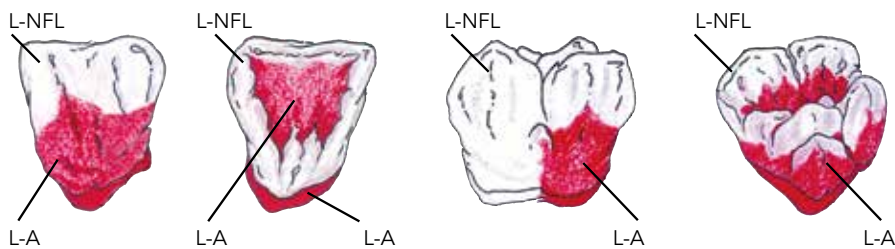
White: Lustre Enamel White (L-W)

Violet: Lustre Enamel Light Grey (L-LG)

Blue: Lustre Enamel Opal (L-OP)

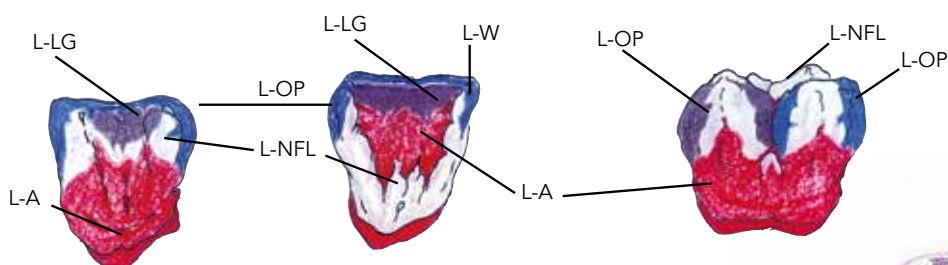
#### Basic Application

For simple characterization it will be sufficient to use L-NFL as a base and L- A for some added chroma.



#### Advanced Application

For a very refined individualization of the restoration a combination of shades can be used. Below is a detailed step by step on how to apply each shade in details.



## 5.2.4. GC Initial IQ Lustre Pastes ONE Application - Step by Step Instructions

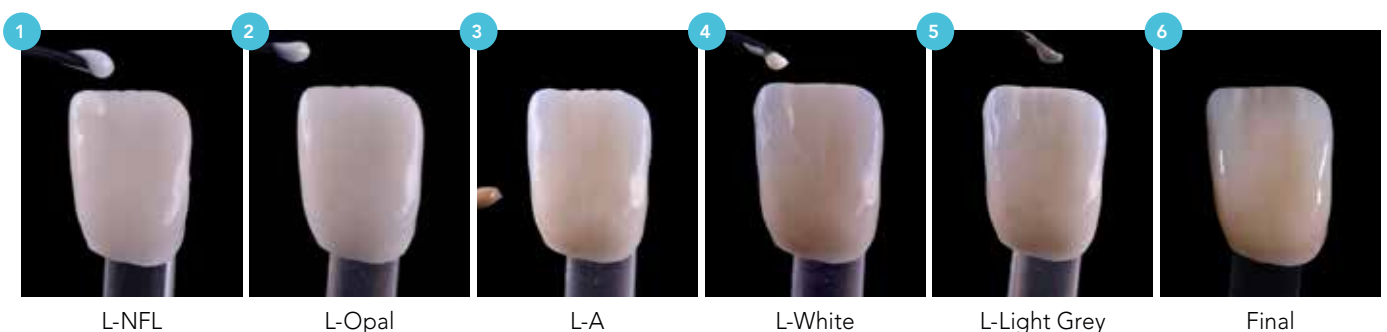
Before applying GC Initial Lustre Paste ONE, the ceramic restoration is shaped and contoured using adjusted diamond burs.

Note:

- Please always stir up material well in the jars before use.

### Procedure

- Clean and dry the restoration after the trial fit.
- Use forceps to hold the restoration.
- Take the desired GC Initial Lustre Paste ONE shade and place it on the mixing pot.
- Adjustment of the GC Initial Lustre Paste ONE consistency
  - Discard one or two drops of the Diluting liquid onto the mixing pot and mix it with GC Initial Lustre Paste ONE 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 GC Initial 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 GC Initial Lustre Paste ONE (Fig.6)





### 5.2.5. GC Initial IQ Lustre Pastes ONE Application in Combination with GC Initial Spectrum Stains Step by Step Instructions

If more definition and deeper characterization is desired, use the extended range of GC Initial IQ Lustre Pastes ONE in combination with GC Initial 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.

- 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)



### 5.2.6. Recommended firing temperatures

FIRING INSTRUCTIONS							
CHARACTERIZATION AND GLAZING		Preheating Temperature	Drying Time	Raise of Temperature	Vacuum*	Final Temperature	Holding Time
	GC Initial Lustre Paste ONE	450°C	4 min	45°C/min	YES	730 - 750°C	1 min
	GC Initial Spectrum Stains	450°C	4 min	45°C/min	YES	730 - 750°C	1 min

\*Not necessary if the furnace does not have Vacuum.

NOTE on GC Initial Lustre Paste ONE and GC Initial Spectrum Stains:

- The GC Initial IQ Lustre Pastes ONE are fired with vacuum. When required, GC Initial Spectrum Stains can be used and fired at the same time. 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).
- Color adjustments can easily be performed using a ceramic painting solution, e.g. GC Initial Lustre Paste ONE /Spectrum Stains
- The above mentioned firing parameters are only guidelines and therefore always need to be adjusted to the firing furnace and its correct functionality. Most important is to obtain the right firing result. These firing parameters can only be used as guidelines.

### 5.3. Firing Instructions - Firing Foam



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.

#### Application



- Apply GC Initial Firing Foam directly from the syringe into the crown or onto the pressed ceramic restoration (Fig 1, 2)
- Carefully place the ceramic restoration on the pin of the ceramic firing tray (Fig 3)
- Please note the correct pin placement for an anterior and a posterior restoration as illustrated in the pictures above (Fig 4a, 4b). Smaller restorations (veneers, inlays, onlays) do not need to be entirely supported.

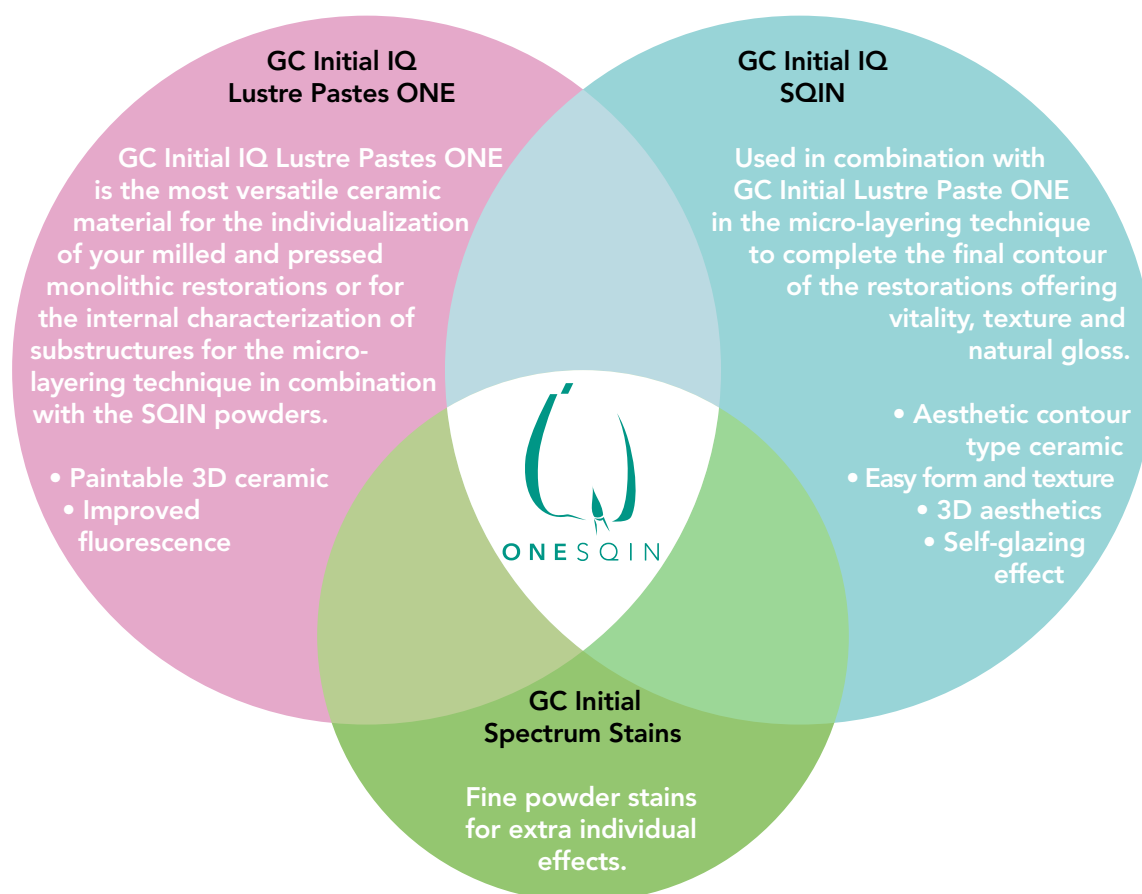
#### Recommendations

- 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 GC Initial Firing Foam under running water with an instrument
- Allow the restoration to cool to room temperature in a place protected from draft

## 5.4. The SQIN concept of micro-layering - Go the extra mile

When form and texture for outstanding aesthetics is desired, it is possible to add GC Initial IQ SQIN into the procedure of painting, as part of the SQIN concept. Thanks to the refined mixture of feldspar-based glasses in GC 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 GC Initial IQ 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.

In combination with the dedicated Form & Texture Liquid, GC 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.



### 5.4.1. Dedicated monolithic design for GC 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. GC Initial IQ 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 GC Initial IQ Lustre Pastes ONE surface.

**Important!** Please do not exceed the 0.6 mm thickness for the total layer of SQIN ceramic to allow for a smooth result after firing.

### 5.4.2. 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

### 5.4.3. Final result using GC Initial IQ SQIN



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!



## Firing Chart for micro-layering with GC Initial IQ ONE SQIN

Step 1 - Individualization & connection firing using GC Initial IQ Lustre Pastes ONE on Initial LiSi Block



FIRING INSTRUCTIONS							
CHARACTERIZATION AND CONNECTION FIRING		Preheating Temperature	Drying Time	Raise of Temperature	Vacuum	Final Temperature	Holding Time
		GC Initial Lustre Paste ONE	450°C	4 min	45°C/min	YES	740 - 750°C

Step 2 - Form & texture using GC Initial IQ SQIN on Initial LiSi Block



FIRING INSTRUCTIONS								
FORM & TEXTURE USING IQ SQIN		Preheating Temperature	Drying Time	Closing Time	Raise of Temperature	Vacuum	Final Temperature	Holding Time
		GC Initial IQ SQIN	400°C	4 min	4 min	40°C/min	YES	750 - 760°C

NOTE on GC Initial IQ SQIN:















- Proceed first with the application and firing of GC Initial Lustre Paste ONE as described above.
- Drying process of GC 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.
- After firing, a Self-Glaze effect (gloss) is noticeable. The intensity of the surface texture and gloss is guided by the temperature. An extra GC Initial IQ SQIN firing can be done lowering the firing temperature with 10°C.
- An extra glaze firing and further individualization with GC Initial Lustre Paste ONE and/or Spectrum Stains & Glaze is possible using the same firing schedule as your last SQIN firing.
- When required, a manual gloss polishing can be performed.
- The above-mentioned firing parameters are only guidelines and therefore always need to be adjusted to the firing furnace and its correct functionality. Most important is to obtain the right firing result. These firing parameters can only be used as guidelines.

## 6. Cementation

Cement with an adhesive resin cement (such as G-CEM LinkForce, G-CEM Veneer) or a self-adhesive resin cement (such as G-CEM ONE).

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, an adhesive resin cement (such as G-CEM LinkForce) or G-CEM ONE in combination with G-CEM ONE ADHESIVE ENHANCING PRIMER is preferred.

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

### 6.1. Restoration preparation

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.





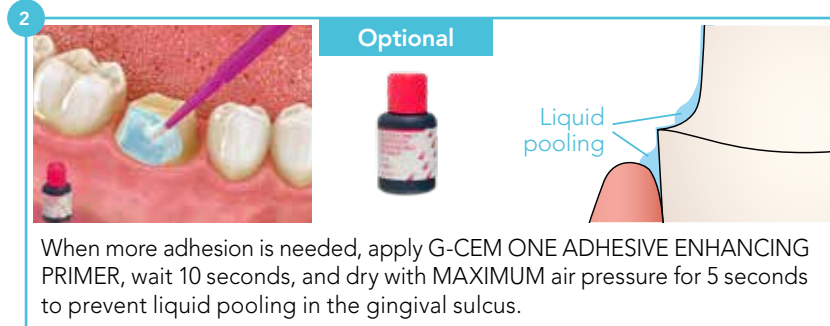
## 6.2. Cementation with G-CEM ONE

Below is a step by step procedure using G-CEM ONE, which is indicated as a universal luting solution. Cementation technique for inlays, onlays, veneers and crowns.

### Pre-treat the tooth



Clean, rinse and thoroughly dry the prepared tooth.



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.

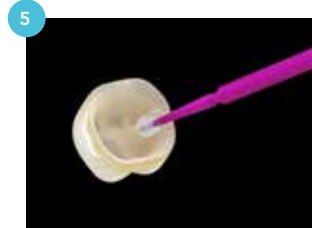
### Pre-treat the restoration



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



Wash with water spray or an ultrasonic cleaner and dry. Alternatively, use phosphoric acid for 10-15sec and rinse.



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



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

### Lute



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



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



Keep moderate pressure until it reaches a solid rubbery consistency.



Remove excess cement while maintaining moderate pressure.



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

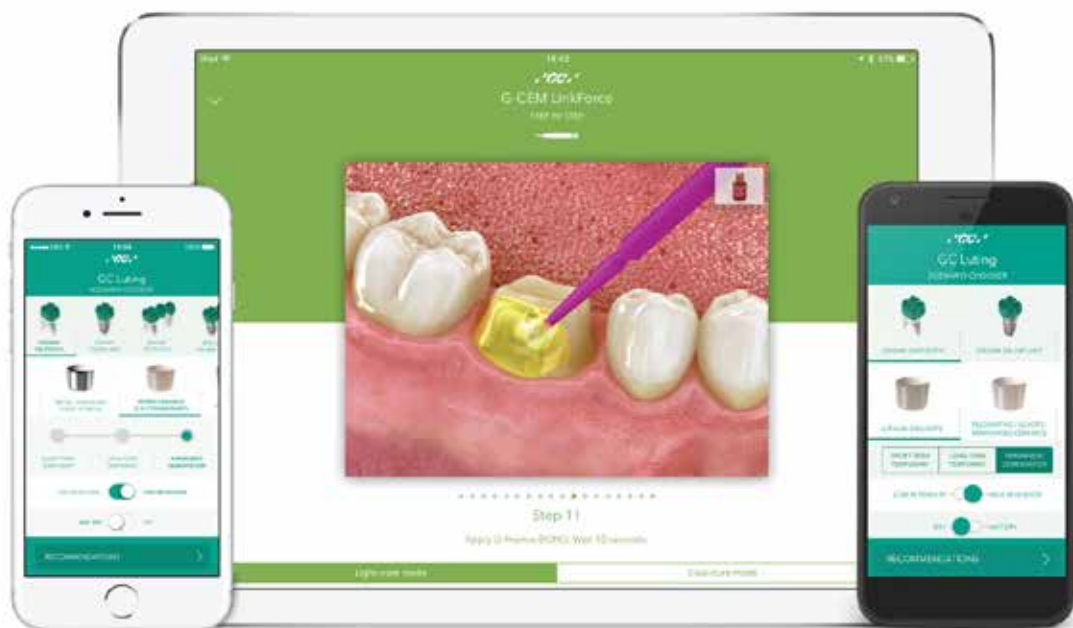


Let the material set for 4 minutes in case restoration does not let the light to pass through.

### 6.3. Luting App

Are you looking for the optimal luting procedure for GC Initial LiSi Block? All of GC's cementation materials are showcased in the Luting Guide. All parameters are accessible in one screen: select your type of prosthetic restoration, choose between a range of modern materials, including lithium disilicate, indicate the circumstances like whether the environment is dry or not, low or high retentive preparations and discover our suggestions from our portfolio of luting materials. The 3D step-by-step will guide you through the process to achieve the most optimal results for all your cementation challenges.

These configurators can be used as a treatment planning tool, but also to enhance patient communication, as dentists can show the procedure of the cementation in an easy and understandable way.



## 7. Frequently Asked Questions

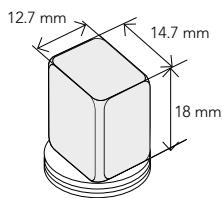
### 7.1. Questions about Initial LiSi Block

**Q1. Does Initial LiSi Block require a firing process?**

Firing is not needed since Initial LiSi Block is a fully crystallized block. Restorations can be finished in one appointment by polishing only.

**Q2. How many sizes are available?**

Initial LiSi Block is available only in one size (14). Size of the block is 12.7 mm x 14.7 mm x 18 mm.



**Q3. What kind of milling machine should be used?**

Please use a wet type milling machine. Dry milling should not be used for this material. Please check our website for updates on milling strategies.

**Q4. Can I stain Initial LiSi Block?**

Yes, Initial LiSi Block can be stained and glazed by using GC Initial Spectrum Stains and GC Initial IQ Lustre Pastes ONE.

**Q5. 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 GC Initial IQ SQIN ceramic.

**Q6. 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.

**Q7. Which polishing burs can I use to achieve high gloss just with manual polishing?**

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.



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## 7.2. Questions about GC Initial IQ Lustre Pastes ONE

**Q1. How can I dilute (adapt the consistency of) the GC Initial IQ Lustre Pastes ONE?**

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

**Q2. What can I do when the consistency of the GC Initial IQ Lustre Pastes ONE is too dry?**

Use the Refresh Liquid to recover the GC Initial IQ Lustre Pastes ONE in case of dryness.

**Q3. How do I change the texture of the GC Initial IQ Lustre Pastes ONE?**

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

**Q4. 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 GC Initial IQ 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.

**Q5. Can I apply more than one layer of GC Initial IQ Lustre Pastes ONE?**

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

**Q6. Can I mix the GC Initial IQ Lustre Pastes ONE with other Initial powders?**

You can use the GC Initial Spectrum Stain powders with moderation to intensify the GC Initial IQ 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 GC Initial Lustre Paste Neutral FLUO.

**Q7. Are the GC Initial IQ Lustre Pastes ONE sufficiently resistant to abrasion?**

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

### 7.3. Other questions

**Q1. 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.

**Q2. If the firing foam has touched the outer surface how can I clean it?**

The surface can be easily cleaned with a brush.

**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 GC Initial IQ 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.

**Q4. 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.

**Q5. 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.





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