



## Biomic™ LiSi Connect

Clinical Etching and Bonding  
Technology Instruction



# CONTENTS

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## 1.Scope of application

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## 2.Selection of resin cement

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## 3.LiSi connect spraying and tissue surface treatment

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- 3.1 Spraying of LiSi connect
  - 3.2 Hydrofluoric acid etching
  - 3.3 Tissue surface cleaning
  - 3.4 Silanization treatment
  - 3.5 Resin adhesive treatment
- 

## 4.Abutment surface treatment

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- 4.1 Rubber Dam Isolation
- 
- 4.2 Acid etching on the bonding surface of the abutment
- 

## 5.Use of resin cement

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## 1. Scope of application:

This code of practice gives the standardized acid etching bonding of veneers treated with AIDITE Biomic LiSi connect spray using AIDITE 3D pro or EZneer special zirconia material for veneers. operation process.

## 2. Selection of resin cement:

For the bonding of zirconia veneer, firstly choose a resin cement with light curing as the main curing method, but if the thickness of the zirconia veneer made is thick, which will affect the light, it is recommended to use dual-curing resin. cement.

However, from the perspective of long-term repair effect, the color stability of dual-curing resin cement is lower than that of light-curing resin cement, which will have a certain impact on the aesthetic repair effect in the long run.

Before the zirconia veneer is officially bonded, a color test paste should be used to test the color to simulate the color after bonding, so as to determine that the cement used can achieve the color effect expected by the patient or have sufficient color blocking ability. However, it should be noted that the resin cement may have a certain color difference with the color test paste after light curing. After using the color test paste, rinse the abutment and the bonding surface of the zirconia veneer with water to prevent the residual color test paste from affecting the bonding.

## 3. LiSi connect spraying and bonding surface treatment

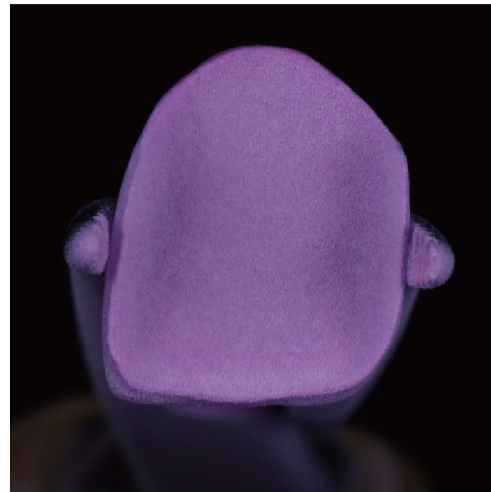
### 3.1 Spraying of LiSi connect

clean



- (1) Use steam to clean the area on the cemented side of the restoration. Be sure to use steam cleaning to ensure that the restoration surface is completely clean.
- (2) Use an air gun to blow off the surface water or use other tools to dry the crown completely.

spray



- (1) Shake Biomic LiSi connect evenly, and then spray it on the bonding surface. Spraying distance: 10-15cm
- (2) Spraying method: move and sweep in one direction
- (3) Spraying times: 1-2 times
- (4) Notes:
  - Be sure to shake up and down repeatedly to ensure that the contents of the bottle are evenly mixed.
  - The spraying distance should not be less than 10cm or more than 15cm, it is easy to cause too little or too much and uneven spraying. If the spraying is uneven, it needs to be cleaned and re-sprayed.
  - Do not spray too much, as too much spray will affect the fit of the restoration.

## sintering

### (1) Sintering curve

Sintering curve (°C)	drying time (min)	Heating rate (°C/min)	maximum temperature (°C)	holding time (min)	vacuum rate	Furnace opening temperature (°C)
450	1	80	890/895/900	1.5	100%	300

### (2) Comparison of effects after sintering:



Before spraying (left)



After spraying (right)

### (3) Notes:

- If the restoration needs to be sprayed with LiSi connect on the tissue surface and glazed on the non-organic surface, please follow the following principles:
- If the sintering temperature of the glaze paste used is lower than that of LiSi connect, please complete the sintering of LiSi connect first, and then carry out glazing sintering. If the sintering temperature of the glaze paste used is higher than the sintering temperature of LiSi connect, please complete the glazing sintering first, and then carry out the sintering of LiSi connect.

## 3.2 Hydrofluoric acid etching

When treating zirconia veneers with LiSi connect spray, we recommend using 4.5% and 9.5% hydrofluoric acid commonly used on the market today to treat the tissue surface of zirconia veneers extraorally.

The recommended actions are as follows:

(1) 4.5% hydrofluoric acid:



Acid etching time: 90 s

(2) 9.5% hydrofluoric acid



Acid etching time: 45 s

Precautions:

- Dosage of hydrofluoric acid: No matter which type of hydrofluoric acid is used, it is necessary to cover the entire tissue surface with hydrofluoric acid, and the recommended dosage is as shown in the figure, and more hydrofluoric acid needs to be used to ensure the acid etching effect.
- Hydrofluoric acid is highly corrosive. After treatment, it needs to be neutralized with a neutralizing agent, and then rinsed with water.
- Please be well protected during acid etching.

(3) Effect after acid etching:



Compared with before acid etching, the brightness of the tissue surface will decrease, showing a dark brightness or matte brightness.

### 3.3 Cleaning the bonding surface

(1) After the porcelain veneer is etched by hydrofluoric acid, it is cleaned by ultrasonic oscillation with 95% ethanol, acetone or distilled water, and the oscillation time is at least 5min.

(2) It is recommended that doctors use 32% phosphoric acid etchant to clean the tissue surface of the zirconia veneer before bonding to ensure that the residual hydrofluoric acid is completely clean

(3) Whether the tissue surface is completely clean will affect the bonding strength to a great extent. Foreign bodies on the tissue surface or residues of other reagents may cause the restoration to eventually fall off. Therefore, please thoroughly clean the veneer tissue surface before bonding, to ensure successful bonding.



### 3.4 Silanization treatment

- Please use silane coupling agent or silane-containing treatment agent for silanization of zirconia veneer.
- It needs to be painted according to the instructions of different brands of silane coupling agent

### 3.5 Resin adhesive treatment

• The adhesive must be applied to the entire surface of the zirconia veneer to be bonded, evenly and thinly. After application, no light curing treatment should be performed and contact with the light source should be avoided.

## 4. Abutment surface treatment

### 4.1 Rubber Dam Isolation

- Before bonding, please use a rubber dam to isolate it from other wet parts to prevent moisture from affecting the bonding strength
- If the edge of the abutment preparation is subgingival or flat gingiva, in order to prevent the influence of gingival crevicular fluid, please perform gingival retraction treatment before bonding

## 4.2 Acid etching on the bonding surface of the abutment



Provider: Shaws Dental Jaye Shaw

- Use phosphoric acid to etch the surface of the abutment, keep the surface of the abutment clean before the operation



Provider: Shaws Dental Jaye Shaw

## 5. Use of resin cement

- Please use the same color of resin cement to apply to the abutment and zirconia veneer according to the color number selected by the color test paste, press down gently in the direction of seating, and be careful not to create a gap inside.
- Please cure according to the light curing time of different cements.

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