

## Introduction

Solabond is a light curing, one part primer and bonding system which does not require additional mixing. Bonding is carried out in a single stage. Solabond was developed for firmly bonding composites and compomers to enamel and dentine as well as non-precious and precious metals. Solabond is also indicated for impregnating root canals prior to filling or cementing passive or threaded root posts. Solabond can also be used as a primer for indirect adhesive restorations, e.g. porcelain and composite inlays, onlays, laminate veneers, crowns and bridges placed with chemically or dual curing cement. The high bond strength between Solabond and enamel or dentine is based on the same principles as apply to glass ionomer cement. The methacrylic carboxylic acid ester provides for long term high bond strength and biocompatibility. In case of irritation or methacrylate allergy, do not use this material. Solabond is compatible with all commonly available brands of light curing composite. As Solabond is based on ethanol and hydrophilic, it can be applied to slightly moist dentine surfaces using the "Wet Bonding" technique. In cases where a dual-curing or self-curing priming and bonding system is recommended, Solabond can be dual-cured using a 1:1 mixture of Solabond and Solabond Activator. Solabond Activator is available separately. This special type of application is described in the Solabond activator instructions.

## 1. Using Solabond for filling materials Preparing for using light curing composite and compomer filling materials

### 1.1 Isolating

It is advisable to use a rubber dam.

### 1.2 Cavity preparation

Before beginning preparation, clean the tooth with pumice and water. To ensure that as little healthy tooth structure as possible is reduced, only prepare the tooth minimally. Enamel cavity margins must be bevelled slightly (0.5–1.0 mm) to enlarge the adhesive surface in the enamel and increase the bond strength.

### 1.3 Pulp protection

In very deep cavities those areas in close proximity to the pulp must be coated with a thin layer of calcium hydroxide cavity liner.

### 1.4 Etching the enamel

Apply Etching to the bevelled enamel margin of the cavity. Keep the etching gel off the dentine. Allow the Etching gel 30 seconds to react. It is advisable to etch deciduous or highly fluoridated teeth for 90–120 seconds before rinsing them with water for 20 seconds. Blow the etched surfaces dry with oil-free, dry compressed air. The etched enamel surface then appears chalky-white.

### Precautions when etching

The etched enamel surface must not be touched or contaminated with saliva prior to applying the Solabond. Should it become contaminated, repeat the procedure described above, i.e. etch, rinse with water and dry again.

**Warning:** Do not allow etching gel to contact the mucosa, eyes or skin. Should this occur inadvertently, rinse immediately with copious amounts of water. Although it is usually not necessary to etch the

enamel for typical compomer applications, etching the enamel does increase the bond strength considerably.

## 1.5 Applying Solabond

Shake the Solabond before use. Use a brush to apply copious amounts of Solabond to the dentine and enamel and brush it vigorously for 30 seconds. Then dry carefully with oil-free compressed air for approximately 15 seconds. Cure the Solabond coat for 20 seconds with a dental lamp before applying a second coat.

**CAUTION:** Do not spill Solabond. If Solabond is not used immediately, keep it in subdued light to prevent it curing prematurely due to ambient light. Solabond will not cure spontaneously.

## 1.6 Applying the second coat of Solabond

Use a brush to apply a second coat of Solabond to the surfaces being adhered and brush it vigorously for approximately 30 seconds. Then dry for approximately 15 seconds with oil-free compressed air and cure for 20 seconds with a dental lamp. The light curing composite filling can then be placed.

## 1.7 Placing, curing and finishing the filling

The composite instructions describe how the composite filling is placed, cured and finished.

## 2. Priming the root canals

### 2.1 Preparation

It is essential to isolate the teeth with a rubber dam. Clean the teeth with hydrogen peroxide solution (3%) or sodium hypochlorite solution. When placing passive or threaded endodontic posts with luting composites, refer to the manufacturer's instructions. Prepare the canal to determine the length of the root post required. Adapt the post to the canal and reduce the length if necessary. Remove the post, keep it in a safe place and prepare the canal for cementing the post.

### 2.2 Priming the root canals

As the surfaces of the root canal cannot be reached with a brush, Solabond must be injected into the prepared canals with a syringe to rinse them for 60 seconds in four separate stages. Ensure that all surfaces being bonded are wetted continually. Wherever possible, use a brush to work the Solabond in and enhance wetting. Soak up the excess Solabond from the root canal using, for example, a soft paper point and dry the treated surfaces carefully for 15 seconds with oil-free compressed air. The Solabond is then cured for 20 seconds with a dental lamp.

### 2.3 Applying the luting composite

Place and cure the luting composite as described in its manufacturer's instructions.

## 3. Special applications for Solabond

**Using Solabond on precious/ non-precious metals and porcelain for repairing crown and bridgework.**

### 3.1 Conditioning the surfaces of the restoration

Roughen the surfaces of the metal or fractured porcelain with  
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a diamond instrument (40 mm) if necessary, sandblast them in addition (with an intraoral sandblaster). Apply etching gel to the rough surfaces, rinse them with copious amounts of water and dry them with oil-free, dry compressed air.

**Warning:** Do not allow etching gel to contact the mucosa, eyes or skin. Ring is 3min. (mixing ratio 1:1 of Solabond and the activator without light and under the exclusion of air).

#### Side-effects

With proper use of this medical device, unwanted side-effects are extremely rare. Reactions of the immune system (allergies) or local discomfort, however, cannot be ruled out completely. Should you learn about unwanted side-effects – even if it is doubtful that the side-effect has been caused by our product – please kindly contact us.

#### Contra-indications/ Interactions

If a patient has known allergies against or hypersensitivities towards a component of this product, we recommend not to use it or to do so only under strict medical supervision. The dentist should consider known interactions and cross reactions of the product with other materials already in the patient's mouth before using the product.

#### Note

Please supply the dentist with the above information if this medical device is used to produce a special model. Please also consider the safety data sheets.



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