

## solabond 7th Gen

### 1 Intended purpose

The product group dentin and enamel adhesives comprises bonding agents for application in adhesive restorative dentistry.

### 2 Product description and user

#### 2.1 Product description

solabond 7th Gen is a self-etching, light-curing single-component adhesive system for the easy, safe, and reliable attachment of filling composites/attachment composites to natural hard tooth tissue. The adhesive can be used with the self-etch method or the selective-etch method.

#### 2.2 Users

For use in the dental practice by dental professionals.

#### 3 Composition

2-(hydroxyethyl) methacrylate, urethane dimethacrylate, 4-(2-methacryloyloxyethyl) trimellitic anhydride, diphenyl (2,4,6-trimethylbenzoyl) phosphine oxide

#### 4 Indications

- Direct, light-curing composite restorations on the natural tooth.
- Indirect restorations of composite and ceramic (inlays, onlays, veneers, crowns) with light- and dual-curing attachment composites, e.g. with Root Cem Viscous.
- Repair of fractured composite fillings.

#### 5 Contraindications

- Do not bring into contact with open pulp tissue.
- Applications in which sufficient exposure is not ensured (e.g. attachment of endodontic posts).

#### 6 Warnings

Contains: 2-hydroxyethyl methacrylate, urethane dimethacrylate, 4-(2-methacryloyloxyethyl)-trimellitic anhydride, diphenyl (2,4,6-trimethylbenzoyl)phosphine oxide.  
Can cause allergic skin reactions. Harmful to aquatic life with long-lasting effects.

#### 7 Precautionary instructions

Avoid inhaling vapours/spray. Wear protective gloves. If skin irritation or a rash occurs: Seek medical advice/medical attention.

#### 8 Interactions with other agents

Phenolic substances such as eugenol inhibit polymerisation. Therefore, do not use any material containing these substances. The dentist should consider known interactions and cross-reactions of the medical device with other materials already in the patient's mouth before using the product.

### 9 Application

#### 9.1 Cavity preparation

Preparation of the cavity according to the conventional rules of adhesive technique.

For optimal results, any contamination of the cavity with saliva or blood should be avoided. Adequate isolation with a rubber dam is highly recommended.

#### 9.2 Pulp protection

In the case of very deep cavities, areas near the pulp should be covered with a thin layer of a firmly hardening calcium hydroxide lining material.

#### 9.3 Use of Solabond 7th Gen

Depending on the nature of the adhesive surface and/or the procedure when using Solabond 7th Gen, proceed as follows.

##### 9.3.1 Self-etch method

Additional etching with etching gel is not necessary.

##### 9.3.2 Selective enamel etching (optional)

The bond to the enamel can be further improved through

selective enamel etching. Unprepared areas of enamel must be conditioned with phosphoric acid. Follow the instructions for use of the phosphoric acid etching gel.

#### 9.4 Direct, light-curing composite restorations on the natural tooth

##### 9.4.1 Application of the adhesive using the self-etch method

The surface to be conditioned should not be touched or contaminated with saliva prior to applying solabond 7th Gen. Place an adequate amount of Solabond 7th Gen into a mixing bowl and apply with a disposable applicator. Continue processing the material quickly (within max. 3 minutes).

Apply the material to the entire wall of the cavity and leave to act for at least 20 seconds.

Remove surplus material with a gentle air stream and then with a moderate air stream for at least 5 seconds using oil-free compressed air until no movable liquid film can be seen any longer. The surface should appear even and shiny.

However, if contamination has occurred, deaning, conditioning and blowing must be performed once again. Then light-cure the adhesive according to the information in the table.

##### 9.4.2 Application of the adhesive using the selective-etch method

Etch enamel areas with phosphoric acid etching gel. Observe the instructions for use of the respective phosphoric acid etching gel. Unless otherwise specified, a 30-second etch time is recommended for enamel. Then rinse thoroughly with water for 15 seconds and dry with oil-free air or with cotton pellets, do not overdry. The surface to be conditioned must not be touched or contaminated with saliva before applying solabond 7th Gen.

Place an adequate amount of solabond 7th Gen into a mixing bowl and apply with a disposable applicator. Continue processing the material quickly (within max. 3 minutes).

Apply the material to the entire wall of the cavity and leave to act for at least 20 seconds.

Remove surplus material with a gentle air stream and then with a moderate air stream for at least 5 seconds using oil-free compressed air until no movable liquid film can be seen any longer. The surface should appear even and shiny.

However, if contamination has occurred, deaning, conditioning and blowing must be performed once again. Then light-cure the adhesive according to the information in the table.

Polymerisation:

Type	Lightintensity	Polymerisation time
Halogen lamp	500 mW/cm <sup>2</sup>	10 seconds
LED lamp	1200mW/cm <sup>2</sup>	

Application of the restoration or attachment composite according to the manufacturer's instructions for use.

#### 9.5 Indirect restorations of composite or ceramic (inlays, onlays, veneers, crowns)

##### 9.5.1 Checking the fit and occlusion of the restoration

In the case of delicate restorations, check the fit very carefully in the unluted state in order to avoid fractures. If necessary, corrections can be made using a fine diamond tool. Milled surfaces should be repolished. For better control of the restoration fit and subsequent removal of surplus material, we recommend using a retraction cord.

##### 9.5.2 Surface treatment of composite restorations

Follow the instructions for use of the restoration material. Unless instructed otherwise, the following recommendation applies:

The inner surfaces of the restoration should be sand-blasted, deaned, for example with ethanol, and dried. Cleaning the surface with phosphoric acid should be avoided since this can weaken the adhesive bonding. Cover the surfaces with a thin layer of solabond 7th Gen, leave to act for 20 seconds and blow the solvent until no  
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movable liquid film can be seen any longer.

### 9.5.3 Surface treatment of vitreous ceramic restorations

Follow the instructions for use of the restoration material. Unless instructed otherwise, the following recommendation applies:

Etch the surface with a hydrofluoric acid gel according to manufacturer's instructions and rinse thoroughly with water; dry with oil-free air.

Apply suitable silane according to the manufacturer's instructions. Cover the surface with a thin layer of Solabond 7th Gen, leave to act for 20 seconds and blow the solvent until no movable liquid film can be seen any longer.

### 9.5.4 Surface treatment of oxide ceramic restorations

Follow the instructions for use of the restoration material. Unless instructed otherwise, the following recommendation applies:

The inner surfaces of the restoration should be sand-blasted, cleaned, for example with ethanol, and dried. Cleaning the surface with phosphoric acid should be avoided since this can weaken the adhesive bonding. Cover the surfaces with a thin layer of Solabond 7th Gen, leave to act for 20 seconds and blow the solvent until no movable liquid film can be seen any longer.

### 9.5.5 Application on the tooth

Solabond 7th Gen can be applied using the self-etch method (9.3.1) or optionally also using the selective-etch method (9.3.2). For this purpose proceed as instructed under section 9.4.1 (self-etch method) or section 9.4.2 (selective-etch method).

Light-cure the adhesive separately according to the information in the "Polymerisation" table.

### 9.6 Insertion of the restoration and removal of surplus

The attachment composite is applied on the inner side of the restoration according to the manufacturer's instructions.

Apply light pressure to bring restoration in situ and fix. Immediately remove surplus attachment composite. Pay particular attention to ensuring that the surplus is promptly removed from difficult-to-reach areas (approximal, gingival margins) before the material hardens.

Immediately after removing the surplus, cover the edges of the restoration with glycerine gel/air blocker. This avoids the formation of an oxygen inhibition layer. This gel can be rinsed off with water after the attachment material has completely cured.

### 9.7 Preparing the finished restoration

Remove the retraction cords. Check occlusion and functional movement and correct, if necessary; polish edges of the restoration.

### 9.8 Repair of fractured composite fillings

If necessary, perform caries excavation.

Roughen the composite surface to be repaired using a diamond tool and sand-blast, if necessary. Clean the surface with water spray and dry with oil- and water-free compressed air. Cover the surfaces with Solabond 7th Gen, proceed as instructed in section 9.4.1 (application of the adhesive) and polymerise.

Apply repair composite. If a pasty composite material is used, it is recommended to apply an intermediate layer of flow composite.

## 10 Troubleshooting

Problem	Cause	Remedy
Solabond 7th Gen does not cure	Light output of the polymerisation lamp is inadequate	Check the light output and replace the light source, if necessary
Restoration does not grip	Processing times and/or etching times not complied with Solvent not fully blown	Observe the indicated times Blow solvent so that no liquid movement of the adhesive can be detected any longer. The surface should appear evenly shiny.
Material dried out or cured	Incorrect storage conditions, bottle not closed properly	After each time material is removed, screw the lid back on to the bottle
No homogeneous film	Adhesive applied irregularly and in an insufficiently thick layer	Reapply fresh material and blow solvent

## 11 General information

A light polymerisation unit with an emission spectrum in the range of 350 - 500 nm is to be used for polymerisation. The physical properties required are achieved only with properly working lamps. For this reason, it is necessary to regularly check the light intensity according to the manufacturer's instructions.

- The light emission aperture of the polymerisation lamp should be held as close as possible to and perpendicularly over the bonding surface. When polymerising a large surface, ensure that all areas are polymerised, for example, by dividing the surface into multiple sections and polymerising each section individually.
- The most important precondition for achieving maximum adhesive values is the proper processing of the adhesive. Leave the bonding agent to act for a period of at least 20 seconds. Ensure that all dentin-enamel surfaces are wetted with adhesive. Do not leave any excess moisture on the surface.
- Do not mix the adhesive with other bonding agents. The material must be carefully dried with an air stream.
- Light-cure the adhesive for 10 seconds using a polymerisation lamp.
- After applying the composite to the wet surface, the Solabond 7th Gen develops optimal adhesion together with the composite.
- The manufacturer is not liable for damage resulting from improper handling.

## 12 Storage and handling

Close the bottle tightly immediately after use. Storage temperature: 2 - 25°C

If not used for a longer period of time, it is recommended to store the product in the refrigerator. Contamination of the contents of the bottle by soiled disposable brushes should be avoided.

## 13 Shelf life

The maximum shelf life is printed on the label of each bottle. Do not use after the expiry date.

## 14 Side effects

With proper preparation and use of this medical device, adverse effects are extremely rare. However, immune reactions (such as allergies) or local discomfort cannot in principle be ruled out completely. Any serious adverse events associated with the use of this product should be reported to the manufacturer stated below and the competent authority.

## 15 Disposal

Leftover quantities and packaging materials are to be disposed of according to the local and/or statutory regulations.



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