

Adhesion to teeth with restorations

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When only adhering to dental tissue, the instructions of the various adhesive materials can be used. However, when dealing with different substrates, such as dental tissue, but also old or new composite and / or IDS [Immediate Dentin Sealing], it can be difficult to take which step first. Often people ask in courses and / or on social media [Instagram and Facebook] what the sequence is of the different steps that must be taken for optimal adhesion. In this description I give the step-by-step plan that we use in our research to obtain optimal adhesion to dental tissue with existing composites and / or an IDS layer.

Firstly, dental material must be roughened using a drill and / or sandblasting. If you want to restore minimally invasive and no preparation is required, it is wise to first sandblast the dental material to be adhered to with Aluminium Oxide 29µm - 53µm. This improves the adhesion as the hard surface layer is then more accessible to the phosphoric acid.

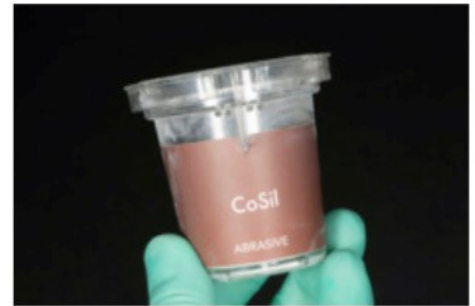
If restorations or an IDS layer is present, it must first be silicatised with CoSil 30µm, preferably with AquaSol. Since the loose particles are then rinsed from the surface with the AquaSol. Subsequently, the enamel will have to be etched [also with a two-step adhesive] with a 35-38% phosphoric acid.

Then the primer can be applied to the dentin and the silane to the silicated composite. These should be applied as described in the enclosed instructions. For silane it is important that only 1 thin layer is applied and not several and that it can dry well afterwards.

As a final step, the adhesive is applied, after which the restoration can be manufactured and / or the indirect restoration can be placed.

Below the steps again quickly:

1. Sandblasting with Aluminium Oxide of the unprepared tooth structures
2. Sandblasting of IDS [max 1-2 seconds] and composites [5 sec] with CoSil 30µm at an angle of 45 degrees, 1 cm distance and at least 2 bar pressure.
3. Etching of the enamel and / or dentin [depending on the adhesive system]
4. Prime dentin if necessary [depending on whether the dentin has been exposed]
5. Silanize the silicated IDS layer or composite, 1 layer, allow to dry thoroughly
6. Adhesive to all structures.



CoSil 30µm

