



New composite technology simplifies restorative work.

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A new aesthetic composite: should I try it out, or should I carry on trusting in what I've been using for years? I used to say that "all composites are the same – the success of a direct composite restoration depends primarily on the practitioner". Today, I believe more in the combination of the two: the perfect match between the practitioner and the product. CLEARFIL MAJESTY™ ES-2 Premium is now my number one composite choice. It's a material that is easy to use, excellent to work with and provides amazing results.



- 1 A 29-year-old man came in with an enamel dentine fracture on tooth 11. The tooth responded with vital signs and the radiograph did not show any abnormal signs. After discussing this with the patient, we decided to apply a direct composite restoration.

After administering local anaesthesia I started the preparation. I removed all unsupported enamel and prepared a labial bevel. First I used a conical shaped diamond drill on a red water-cooled handpiece. For additional roughness, I used a cone drill on a blue slowly rotating handpiece.



- 2 In order to avoid colour mismatches through dehydration, it is important to determine the colour as soon as possible. In this situation I applied small round bits of composite to the adjacent teeth and compared them to the tooth being treated.



- 3 CLEARFIL MAJESTY™ ES-2 Premium A1D (Kuraray) matched well with the cervical zone. I decided to use it as a dentine mass. As a way of checking, I also held a lighter shade (WD) next to it. It was clearly too white. To check the colour of the enamel composite I covered dentin shade CLEARFIL MAJESTY™ ES-2 Premium A1D with A1E. It made good sense to use the fixed colour combination A1D / A1E for this restoration. The optical properties of CLEARFIL MAJESTY™ ES-2 Premium made sure that I was fully confident when applying the restoration.



- 4 Before etching, priming and bonding, I applied a Contour Strip (Ivoclar Vivadent) into the sulcus. I fixed it with a little bit of OpalDam (Ultradent). I made sure to avoid using wedges to prevent a negative influence on the restoration's contours.



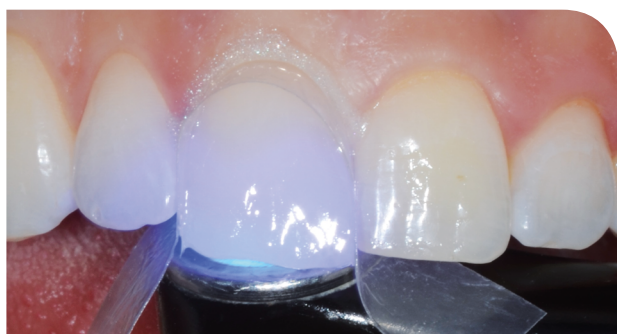
- 5 To create a natural effect, I took the dentine's labial morphology into account. Using light transillumination for tooth 21 gave me an excellent reference when restoring tooth 11.



- 6 Already when applying the first layer of enamel (A1E) on the polymerized A1D, CLEARFIL MAJESTY™ ES-2 showed its blending properties. A1E invisibly merged with the A1D that had already been applied.



- 7 For optimal modeling I used rubber brushes so that the composite didn't stick to the brush.



- 8 In these kinds of situations I prefer hardening palatally first and labially second.



- 9 A subtle transition was visible between the incisal, exposed enamel composite and the layered part.

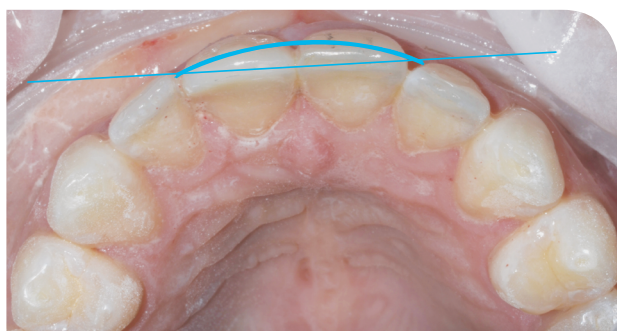


- 10 I carried out the initial finish with a fine, pointed diamond drill. I only started shortening after optimizing the shape, by means of a rough or medium polishing disk. To do this, I positioned myself in front of the patient.



- 11 With a pencil I marked the primary anatomy (the mesial and distal transition angles) and secondary anatomy (the vertical grooves in the labial plane). As a reference, I also marked the existing secondary anatomy of the adjacent tooth with the pencil.

In order to create the vertical grooves, I used a pointed, fine diamond drill.



- 12 I always checked the incisal and labial lines from a palatal point of view. The curve optimally resembled a Romanesque arch. The palatal view is an important value indicator for the final shaping of the element that is to be restored.



- 13 I then polished using CLEARFIL™ Twist DIA from Kuraray Noritake Dental. These polishing discs, made of a rubbery component and diamond particles, ensure high gloss very quickly. A special feature is that the carefully applied secondary and even tertiary anatomy is not undone. Step one is the slight correction with the CLEARFIL™ Twist DIA pre-polisher. It reaches every tooth corner. Step two is performed using the CLEARFIL™ Twist DIA high-shine polisher. It helps to create natural gloss within a few seconds.

(Note: The shown CLEARFIL™ Twist DIA pre-polisher and high-shine polisher are prototypes. The commercially available versions are dark blue and light blue.)



14 End result before rehydration.



15 End result after rehydration.

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