Finally a putty material for dynamic mixing

The new Honigum-MixStar Putty provides significantly more assurance for the critical and sensitive impression taking process.

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Introduction

The impression taking process is a critical step for a successful treatment with inlays, veneers and dental prostheses. The quality of the restorations fabricated in the laboratory essentially depends on the impression results. Furthermore, the timely and reliable execution of this treatment step with a predictable result is the basis for an economically successful application of the treatment concept. In many practices double-mixing and correction impressions have become proven procedures for the respective indications.

1.1 Defective fillings in tooth 36 and 37.

Double-mixing technique

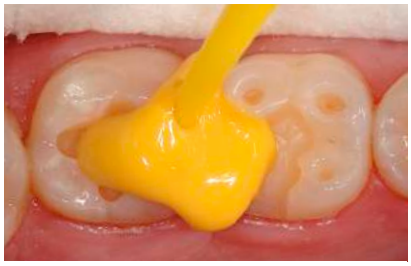
The double-mixing technique is easy, quick and "a must" for indications such as inlay impressions. In our practice we use this impression technique for crown and bridge preparations as long as the preparation line does not reach too far into the subgingival area, and also for inlay and veneer restorations. So far we have been using a kneadable VPS in combination with the hydrophile Honigum-Light wash material for this technique. During the application kneading the two putty components always constituted an element of uncertainty. The quality of the mixed putty depended considerably on the assistant's kneading technique, thus affecting the material's consistency. With the use of Honigum-MixStar Putty in the MixStar-eMotion or other mixing devices the material is mixed consistently, thus providing in a significantly higher degree of assurance in the application process. The much more relaxed procedure makes the impression taking step far more pleasant for both the dentist and the patient, and the assistant can focus better on supporting measures. Another important advantage is the improved economical aspect because only the amount of material required for the tray size is used. Since the assistant does not have any direct contact with the material during the mixing process Honigum-MixStar Putty also meets or beats all hygienic requirements. The material's consistency after mixing is ideally suited for the double-mixing technique, it can be applied into the mouth with light pressure, and, at the same time, is rigid enough to provide a detailed imprint for the light-bodied silicone.

1.2 Preparation.

1.3 Loading the impression tray with Honigum-MixStar Putty.

Case 1 – double-mixing impression

Defective fillings in tooth 36 and 37 are to be replaced with gold inlays (fig. 1.1). The preparation of 36 includes the distobuccal cusp since it has been weakened considerably by undermining decay. The preparation line is beveled only around the approximal box (fig. 1.2). Subsequently, the selected impression tray is tried in the mouth and its dimensions verified. Shortly before loading the impression tray with Honigum-MixStar Putty the cavity is filled (bubble-free) with Honigum-Light (fig. 1.3 and 1.4). After the tray filled with Honigum-MixStar Putty is loaded with Honigum-Light it is positioned in the mouth. As soon as the materials are fully set the impression can be easily removed from the mouth (fig. 1.5). The impression is evenly detailed and precisely lined. "Impression protrusions" are not visible (fig. 1.6). Around the prepared teeth the impression effectively shows the finest detail of the entire preparation line reproduced by the material combination. Each detail of the prepared teeth is reproduced in a dimensionally exact form on the gypsum model (correction model) (fig. 1.7) which is required for dental technicians to fabricate high-quality restorations. In cooperation with the dental laboratory Schieve (Trittau) we have routinely obtained optimal results. The inlays on the saw cut model exhibit a perfect marginal fit. The seated inlays did not require occlusal correction which was confirmed clinically as well (fig. 1.8).



1.4 Filling the cavity with the correction material Honigum-Light.

1.5 Removing the double-mixing impression from the mouth.

Correction technique
Compared to the double-mixing technique, correction impressions are clearly more work. In our practice, however, this is a standard technique for restorations with deep preparation lines. And even for correction impressions Honigum-MixStar Putty convinces with its outstanding consistency. In the plastic state it adapts well to the teeth and does not form unwanted "impression protrusions". Once hardened it is very rigid and can be removed easily from the mouth. A sharp scalpel glides effortlessly through the material thus making it easy to trim undercuts and to cut pressure relief channels. This, by the way, should be done generously in order to prevent the first phase from distorting due to excessive pressure and resulting in inaccuracies. Honigum-MixStar Putty's outstanding recovery characteristics, however, reduce this risk substantially. For corrections with Honigum-Light the material is pressed deeply into the sulcus, thus providing a detailed reproduction of the preparation line. For both impression techniques Honigum-MixStar Putty is well-suited and provides finely detailed and dimensionally exact impressions.

Case 2 – Correction impression
Tooth 46 was prepared with a resin core build-up. The loss of the cusps requires an overlay. Since the projected porcelain-fused-to-metal crown is to be fabricated vestibularly with a ceramic shoulder the groove preparation in that area is rounded (fig. 2.1). A slightly subgingival preparation line in the visible margin area provides optimal esthetics. First, before taking the impression, the impression tray is tried in. A tray adhesive provides secure retention of the impression material in the tray. It is applied evenly shortly before the tray is loaded. The impression tray is then filled evenly using the MixStar-eMotion. Correctly done the impression material appears in the typical "banknote" pattern. The loaded tray is inserted into the mouth by applying equal pressure and, once completely set, is removed again (fig. 2.2). The mandibular arch is evenly reproduced. As shown in the enlarged view (fig. 2.3) even the finest details of the preparation are visible. The impression is now trimmed, i. e. undercuts, interdental areas and protrusions are removed. Pressure relief channels prevent build-ups of the light-bodied material during correction. Around the preparation impression drains are applied as well, however, without directly touching the prepared tooth (fig. 2.4). After trimming, the impression should be thoroughly rinsed and dried. For corrections with Honigum-Light the material is directly applied into the exposed sulcus after the retraction cord has been removed (fig. 2.5). Afterwards the impression tray is filled with the light-bodied material as well. Despite the presence of sulcus fluids, Honigum-Light's excellent hydrophilicity ensures deep penetration into the sulcus. The result is an even thinly corrected impression (fig. 2.6). We'd like to particularly emphasize the secure bond between Honigum-Light and Honigum-MixStar Putty. The enlarged view shows the fine detail reproduction and the cleanly preparation margin. This is also confirmed on the saw cut/ control model which shows a circular, perfectly formed preparation margin (fig. 2.7). The entire mandibular arch is precisely reproduced - a prerequisite for an exact reproduction of the restoration's occlusion. Fig. 2.8 shows the seated crown, i. e. the result of a successful treatment concept with processes and materials in perfect harmony with each other.

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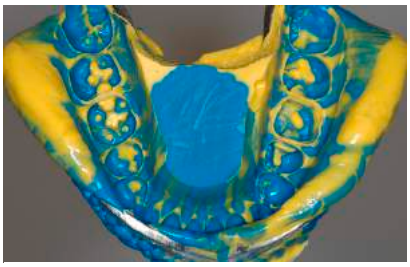
1.6 Perfect impression of the finest details.


1.7 Exact reproduction of the preparation margin on the correction model.


1.8 Perfectly fitting prosthetic restoration.


2.1 Modified groove preparation on tooth 46.


2.2 Removal of the set pre-impression (Honigum-MixStar Putty) from the mouth.

2.3 Reproduction of the finest preparation details in the pre-impression.

2.4 Trimmed pre-impression with pressure relief channels.

2.5 Syringing the preparation with Honigum-Light.

2.6 Fine detail reproduction and cleanly formed preparation margin.

2.7 Complete reproduction of the preparation margin on the control model.

2.8 Perfectly fitting prosthetic restoration.