

Impression taking by using Panasil binetics putty and the separating foil Plicafol – an application report

In order to take an impression by use of the separating foil Plicafol, it was common procedure to manufacture a kind of individual impression tray at the chairside using an A-silicone-based putty. The material of choice was a manually kneaded putty. A similar consistency is now offered by the newly available, machine mixable Panasil binetics putty. It comes in a bag and makes in combination with the separating foil and correction material of low and medium viscosity a precision impression feasible in a short amount of time without manual mixing or the use of an individual impression tray from the dental laboratory.

The problem with the double mix impression technique is that in a ready-made tray pressure cannot be applied equally to all areas, which often results in air locks or an incomplete impression of the sulcus area.

The problem with the classical correction impression technique is that the impact pressure is often too strong in spite of being built up evenly. The lack of space for the correction material may cause compressions in the initial impression. Furthermore, excessive measures are involved like trimming, cutting of drains, trial replacement and cleaning of the initial impression.

Foil impression taking

In order to obtain an ideal space layer essential for distribution of compression on the correction material, different separating foils have been recommended. These are placed on top of the mixed putty and hug the teeth similarly to a deep-draw foil during press on and in doing so create the space layer for the correction material added in the second work phase. The ideal separating foil should show good ductility, but no tendency for elastic recovery. The separating foil Plicafol of US-Dental Tübingen shows the desired characteristics: a hydrophobic waxy surface, a non-stretched thickness of 0.2 mm, no taste or smell, and does not react with the impression material.

For deep-drawing the foil needs a certain ram force supplied by the tray material. Therefore, tray material's consistency needs to be ductile. Panasil binetics putty fast is now the first machine mixable material

Technical data

product	Panasil binetics putty fast	Panasil binetics putty soft
total working time	1 minute, 30 sec.	2 minutes
time in the mouth	2 minutes, 30 sec.	3 minutes
setting time	4 minutes	5 minutes
linear dimensions of change	-0.25%	-0.25%
recovery after deformation	99.5%	99.5%
strain in compression	2.5%	3.5%
shore-A-hardness	69	60

available. It has been tested together with the syringe material Panasil contact two in one by foil impression technique at the Department of Conservative Dentistry, University of Tübingen. According to DIN Panasil binetics putty is a ductile impression material suitable for the initial impression, type 0. There are two varieties to choose from: Putty fast suitable for the correction impression technique and Putty soft suitable for the sandwich technique.

Procedure

The putty is filled into a ready-made tray directly from the electrical dosing or mixing apparatus. Normally, the tray can be used without additional trimming. The tray is supposed to be pressed slightly against the released putty until it is filled to about two thirds (Fig. 1). The separating foil is now slightly pressed on to the putty (Fig. 2) and stays fixed even while the tray is being situated into the mouth. The tray with the foil functioning as space layer is now pressed onto the teeth and immediately and repeatedly raised for about half of the teeth height and replaced again. This way undercuts and overhanging areas are avoided and a replacement is feasible without deadlocks. Due to its high ductility the foil hugs the teeth and can be easily removed from the set putty without residue. The result is a very rough impression, its appearance and function is similar to that of a ready-made tray, but without the usual crease formation and overhangs caused by other foils (Fig. 3). This pre-impression can be used immediately as initial impression for the correction impression technique or as custom-made impression tray for the one-phase-impression technique without any additional handling. The following steps describe what the actual impression



Fig. 1: Two thirds of a ready-made tray are filled with Panasil binetics putty fast.

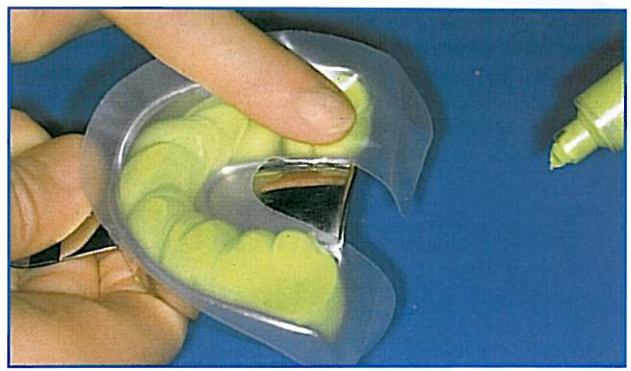


Fig. 2: Plicafol-separating foil is placed on top and is gently pressed on. The tray with the putty and foil is situated in the mouth and pressed on tightly.

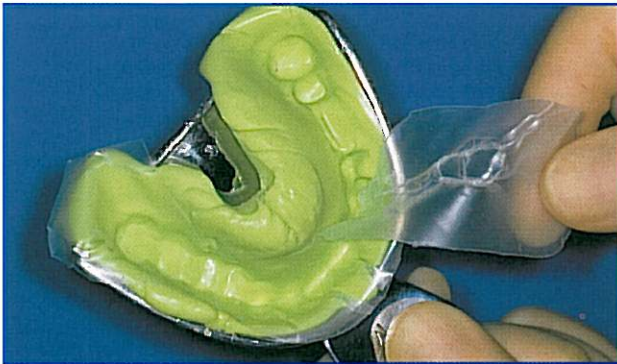


Fig. 3: The deep-draw foil can be removed without residue. The pre-impression functions like a custom-made tray and is ready for further use without additional changes.

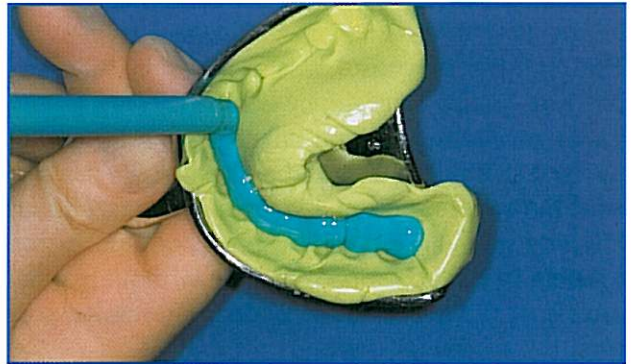


Fig. 4: The impression material is placed into the tray evenly and in one piece until the layer has a 2 to 3 millimeters thickness.

consists of. First of all the entire tray is filled with the correction material Panasil contact two in one up to a thickness of 2 to 3 millimeters (Fig. 4). At the same time or afterwards the material is applied by intra-oral syringing around the preparation in the usual fashion (Fig. 5). The tray is now being situated over the teeth with moderate pressure and held in place until the material is completely set. Afterwards the tray is axially removed. The completed impression shows a distribution of material layers typical for the foil impression. Those, who are used to the classical correction impression technique often find the thickness of the layers unusual. However, the typical air locks of the double-mix-technique are avoided altogether (Fig. 6). Because of the foil regulating the even distribution of the pressure, the unavoidable compressions of the classical correction impression do not occur.

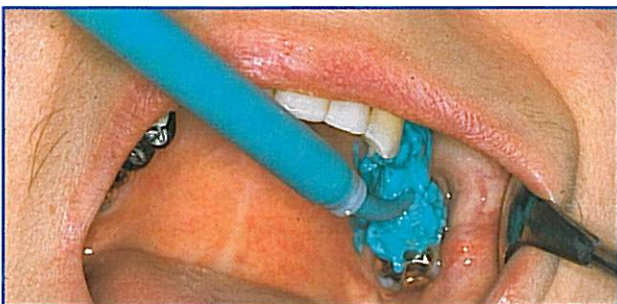


Fig. 5: Additional material is applied by intra-oral syringing around the details of the preparation and the sulcus area.

Results and summary

The machine mixed putty Panasil binetics putty fast is in combination with Panasil contact two in one very suitable for the foil impression technique with Plicafol. The consistency of this putty can be compared to that of manually mixed putties. Used as a pre-impression, it shows the same characteristics like a custom-made tray during the one-phase-impression technique. The manufacturing of a custom-made tray in the dental laboratory is no longer necessary, nor is trimming, replacement, cleaning or crease removal like required by the correction impression technique. As a result there are precise impressions without air locks. The described procedure also gives the users of silicone materials the possibility to decide against manual mixing techniques.



Fig. 6: Details of a typical foil impression technique in bridge preparation using Plicafol-separating foil and the A-silicone-based materials Panasil binetics putty fast and Panasil contact two in one

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