

Impression Troubleshooting Tips



Tearing at the Margin

CAUSES	SOLUTIONS
Insufficient retraction	Retract gingival tissue to entirely capture the prepared area. Retraction cords as well as retraction pastes are suitable.
Inhibition of setting due to use of acidic retraction materials/hemostatic agents like aluminum or ferric salts	Thoroughly rinse preparation with water and dry before taking the impression.
Working time exceeded, flowability already impaired	Select material with sufficient working time (i.e. regular set instead of fast set). Make a choice depending on the individual situation and preference of material. Do not exceed working times given in the instructions for use. In case of 3M Dental materials follow given intra-oral syringing times for wash materials. Pay attention to storage temperature. Working times are reduced due to higher temperatures of the product, while intra-oral setting times might be longer if the temperature of the product is lower.
Smear layers from custom temporary, provisional cements (acrylics) or core build-up present	Smear layers from acrylates (e.g. core build-up or temporary materials) can inhibit the setting of impression materials. When core build-up and final impression are made in one appointment: • Be sure to remove the smear layer completely prior to impression taking with alcohol/by polishing. Check surrounding teeth and tissue for any residue. When the temporary and final impressions are made in one appointment: • Fabricate the provisional after taking the final impression or remove the air-inhibited layer on the exposed preparation with alcohol before taking the final impression. • Do not use impressions already used to fabricate the provisional for subsequent precision impression taking. • If a temporary is removed prior to impression taking: Remove all residues of cement and clean the abutment tooth. In case of a core build-up remove the air-inhibition layer on the exposed preparation with alcohol before taking the final impression.
Inadequately mixed materials	Bleed cartridge before applying the mix tip to ensure even dispensing. Then use the mix tips recommended by the manufacturer and dispense a pea-sized amount onto a mix pad prior to use.
Premature removal of the impression	Follow manufacturer's instructions for intra-oral setting time and make sure that the impression material has completely set before removal. Store impression material at room temperature. Usually, times given in the manufacturer's instructions for use are valid for a storage temperature of 23°C/74°F. Working times are reduced due to higher temperatures of the product, while intra-oral setting times might be longer if the temperature of the product is lower.

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