

NEW PRODUCT

review



TEMPHASE
(SDS KERR)



by
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Temporization materials and techniques have undergone tremendous improvement over the past decade. Methyl and ethyl-methacrylate based materials have always posed significant problems for chairside provisional restoration fabrication. Among the many drawbacks presented by these powder/liquid systems are the annoying taste and odor in addition to the exothermic polymerization reaction that many times cause our patients to rightfully complain. Due to the fact that these materials require a proper powder/liquid ratio, mixing them to the desirable consistency can sometimes prove cumbersome. The polymerization contraction is another fact that demands careful attention on the part of the operator when placing and removing the provisional restoration still in its plastic phase for the least lack of alertness will probably lead to locking of the restoration in the prepared teeth. Lack of color stability and a dull and depth-lacking appearance are drawbacks that impair the esthetics imparted by these systems when used chairside. Moreover, these sys-

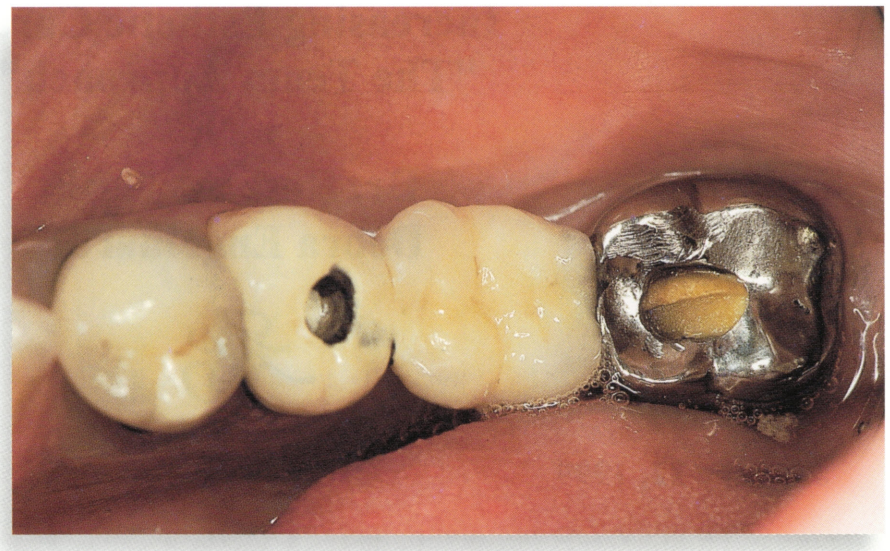


Figure 2



Figure 3



Figure 4



Figure 5

tems are very time consuming and are not cost effective.

With the intent of creating solutions for mastering the potential variables involved in the temporization process, newly improved systems have become available. Kerr has recently introduced one such system. **Tempphase** is a two-component chemical cure, bis-methacryl-type composite material designed for crown and bridge restorations (Figure 1). The material is 41% by weight filled with submicron fumed silica and silane-treated radiopaque barium glass fillers with an average particle size of one micron. Tempphase is packaged in a new split-barrel cartridge that allows for easy dispensing in a 1:1 volume ratio. The introductory kit is available in an emerald-green plastic tackle box with a removable white plastic tray securing the contents. The extruder is sold separately and comes in a hard cardboard box. The kit contains two cartridges (72g ea.), 24 mixing/dispensing tips, two Revolution flowable composite syringes (1g ea.) shades A2 and A3.5 with 20 tips, and one syringe (3g) of relief separating gel with ten relief syringe tips. Tempphase intro kit comes with two shades: A2 and A3.5; shades B1, C2, and D2 can be ordered as refills. They all match the Vita Shade guide very closely and the translucency is just right to determine a good blend with the adjacent teeth. The shelf life at room temperature is 18 months. It is available in two speeds (regular and fast set). The regular set formulation has an extra-oral working time of 45 seconds and an intra-oral dwelling time of two minutes; the set time is about five minutes from the start of mixing. The fast set formulation has an extra-oral working time of 25 seconds and an intra-oral dwelling time of one minute; the set time is about three minutes for the fast set from the start of mixing. Tempphase finishes and polishes to a very smooth, somewhat glossy surface. The directions

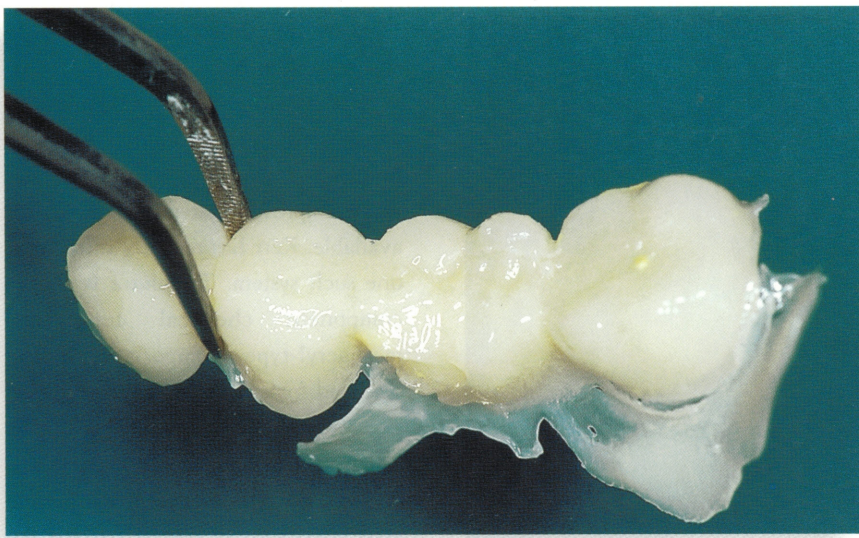


Figure 6

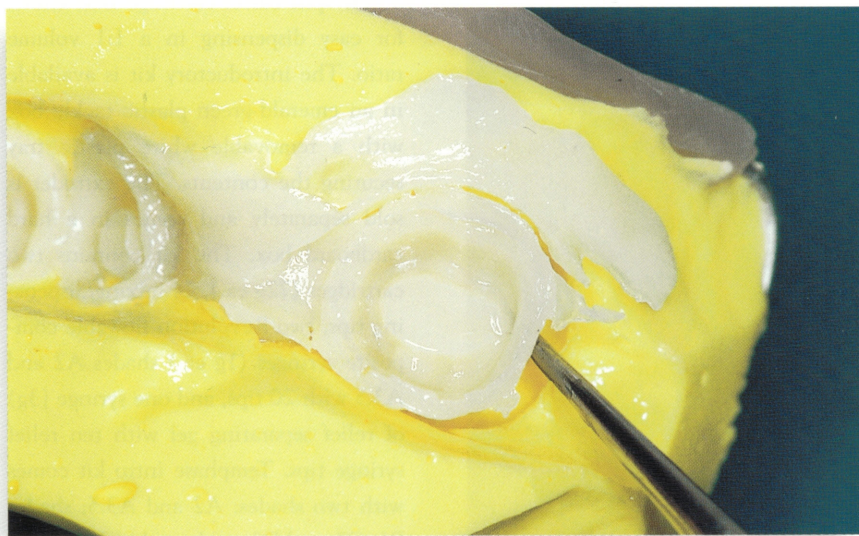


Figure 7

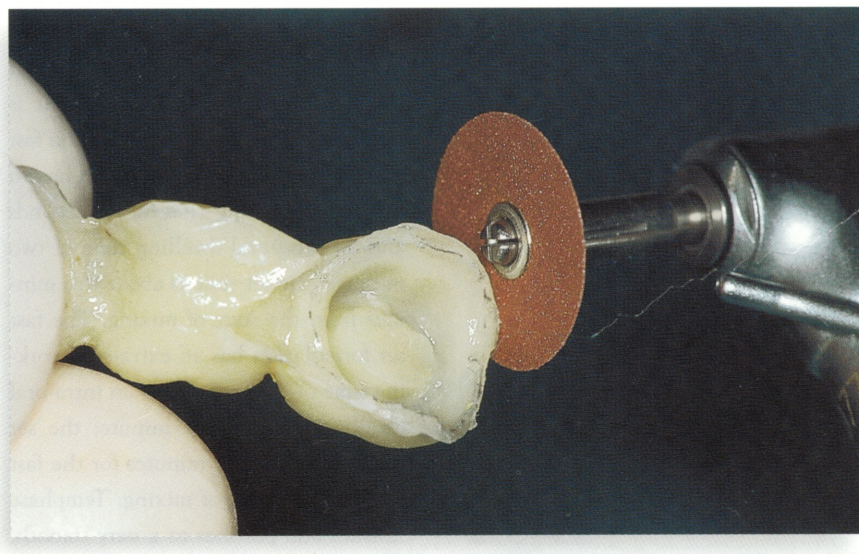


Figure 8

come in illustrated laminated cards depicting the steps for usage, including adding to short margins and repairing provisional restorations.

In my practice I have found Temphase to be a system that takes the stress away from chairside temporization. Its ease of handling and clinical performance has tremendously decreased the amount of time I used to spend fabricating my provisional restorations. Not only does it provide a simpler method of mixing and dispensing the material through its auto-mix cartridge, it also offers far superior esthetics than usual powder/liquid systems. I have successfully used Temphase on temporization of laminate veneers, single crowns, and fixed bridge work. Below a predictable and efficient technique for a multiple unit temporary restoration is described.

1. Check the defective restoration for flaws or lack of proper contour and mock it up to the right anatomy and occlusion with composite if necessary prior to impression taking (Figure 2).
2. Take a pre-operative alginate impression of the teeth to be prepared and remove any interdental flashes that may interfere with reseating of the tray in the mouth (Figure 3).
3. Prepare the abutment teeth and reseat the impression making sure it can be repositioned over the temporization area passively. When preparation is complete, clean the abutment teeth with a chlorhexidine bactericidal solution such as Consepis (Ultradent).
4. If a stress bearing area is being temporized and more fracture resistance is desired on the part of the temporary restoration, reinforcement fibers such as Connect (Kerr) or Ribbond (Ribbond) can be utilized. Simply take a long enough rein-

forcement ribbon and embrace the prepared abutments while creating a linkage between them. Wet the ribbon with adhesive and the Revolution flowable composite that comes in the kit and light cure it, tacking it in position. The reinforcement ribbon will be covered and buried inside the temporary and will come off with it when it is removed from the prepped teeth.

5. Dry the impression fully. Bleed the cartridge to ensure proper

base/catalyst mixing, position the dispensing tip onto the cartridge and gently extrude the material into the impression filling one tooth at a time until the segment to be temporized is completely full (Figure 4).

Using Temphase fast set requires timely handling since it reaches initial set at 30 seconds from mixing. When temporizing multiple units, it is advisable to use Temphase regular set instead to avoid unde-

sired setting of the material before reinsertion of the impression in the mouth.

6. If a resin-based or glass-ionomer core build-up has been used, apply a thin layer of Relief Separating Gel to the material to prevent adhesion to Temphase during the curing stage. Reseat the impression and let it dwell in the mouth for the time recommended for either the fast or regular set material being used.
7. Remove the impression. If the preparation is not retentive, the temporary should come off with the impression (Figure 5). Should the temporary remain in the abutment teeth, gently tease it out of place with an explorer or a spoon excavator. This should be accomplished fairly easily since the material at this stage will be firm but still elastic.
8. Remove the temporary from the impression, and while the material is still elastic, trim gross flashes and overhangs with scissors (Figure 6). Seat the temporary back onto the preps and have the patient bite down on it gently, allowing it to set an additional two minutes if using the fast set and three minutes if using the regular set.
9. Gently remove at this time, highlight the finish lines with a pencil and trim the gross excess with aluminum oxide disks (Soft-Lex Pop-On XT, 3M; Flexi-disks, Cosmedent) and medium/coarse diamonds (Figure 7). Place the temporary back onto the preps, and if some resistance to seating is encountered, trim the inside of the temporary abutments with a diamond bur until it seats fully.



Figure 9



Figure 10

10. If the preparation finish lines are clear and supra-gingival, usually there is no need for relining. However, if marginal readings are not clear or if there are any voids around the margins, ooze some Revolution flowable composite around the margins and reseal the temporary (Figure 8). With the patient occluding on the temporary or finger pres-

sure being exerted on it, wipe excess composite with an artist brush and light cure the margins for 10-20 seconds. Remove the temporary and further light cure the margins for 30-40 seconds to ensure total marginal hardness.

11. At this stage, should a mushy surface resulting from the air-inhibited layer still be present, wipe it off with alcohol gauze.

Once more, highlight the margins with a pencil and proceed to trim and refine the margins with aluminum oxide disks and diamonds (Figure 9).

12. Check the occlusion with articulating paper and equilibrate it to ensure proper force distribution. Anatomy refinement can be carried out with 12-fluted finishing burs (#7901, #7904) (Figure 10).

13. Check for precision of fit making sure there is neither overhanging nor undercontoured margins that would cause periodontal inflammation. Polish the temporary the usual way with composite polishing rubber cups, wheels, and points (Politip, Vivadent; Flexi-cups, wheels, and points, Cosmedent). A higher gloss can be achieved with aluminum oxide polishing pastes (Enamelize, Cosmedent; command Ultrafine Luster Paste/Micro I, Kerr). It should attain a fairly glossy surface due to its small average particle size. Ochre and brown tints can be used sparingly to create occlusal characterization (e.g. Kolor + Plus - Kerr; Creative Color Tints — Cosmedent) if so desired (Figure 11).

14. Clean the preps with Consepsis and cement the temporary with a no-eugenol-type temporary cement (Temp Bond NE, Kerr) seat the temporary. Clean the excess cement from around the margins really well to ensure proper tissue healing (Figure 12). *AD*



Figure 11

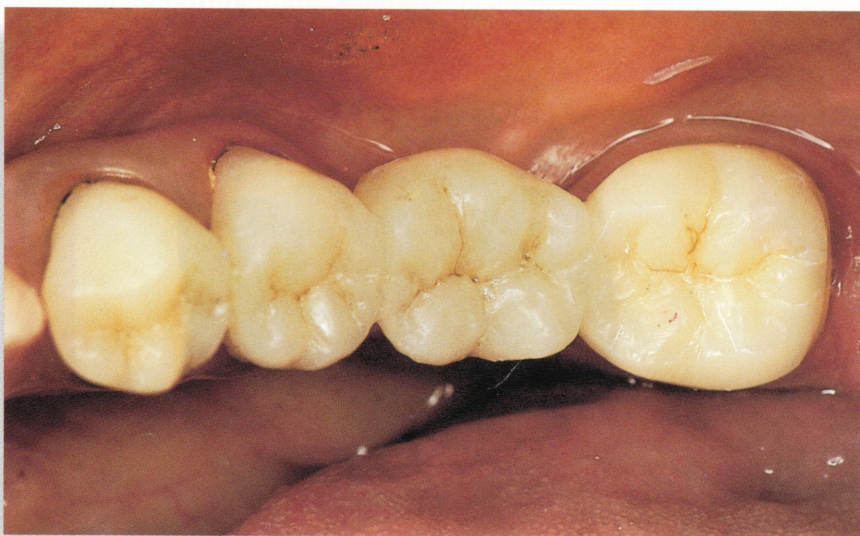


Figure 12