HOW TO

PROVISIONAL EXCELLENCE WITH ZINC-OXIDE NON-EUGENOL TEMPORARY CEMENT

Using ZONEfree from DUX Dental can provide excellent results for a number of indications.

Information provided by DUX Dental and Contemporary Product Solutions.

SHANNON PACE BRINKER CDA, CDD

PROVISIONAL RESTORATIONS PROVIDE an interim treatment option and a tool to ensure proper fit, occlusion and patient comfort before final restorations are fabricated. Provisional restorations require a strong bond to avoid failure during the temporary trial period, but they also require limited strength for easy removal. Along with the introduction of provisional restorations more than 80 years ago came the development of provisional cements in attempts to meet the needs of dentists and create ideal bond strength.

Current zinc-oxide non-eugenol provisional cements incorporate many of the latest advancements. Unlike traditional non-eugenol cements, those on the market today demonstrate durability and improved characteristics. With advanced technology, materials match the restoration color and support high esthetics. They provide easy removal without harming the tooth preparation or pulp. Indicated for temporary indirect restorations, including crowns, fixed partial dentures, inlays, and onlays, they also provide a tool for temporary cementation ofdefinitive restorations of the same types, allowing for proper evaluation of the contour and margins as it relates to periodontal health.

Today's Option: ZONEfree

Unlike most provisional cements, using ZONEfree from DUX Dental (Oxnard, CA, DUXdental.com) ensures high esthetics and ideal retention and strength. ZONEfree strongly bonds to tooth preparations, maintaining temporary restorations' placement, but also allows easy removal. The zinc-oxide formula provides the basis for highly esthetic provisional cementation. Ideal for esthetic cases, indications for ZONEfree include all provisional restorations and definitive restoration try-ins, including crowns, fixed partial dentures, inlays, and onlays.

Developed using prismatic nanofillers, the provisional cement particles blend with any adjacent color. The translucency of the cement ensures precise placement by the dentist. Additionally, its neutral color does not diminish the esthetics of the provisional restorations. Achievement of high esthetics also provides an important tool for provisional treatments, ensuring high patient satisfaction and approval.

Conveniently packaged in an automix delivery system, ZONEfree enables accurate placement and minimal waste (**Figs. 1 and 2**). This system allows dental professionals to correctly and easily dispense the proper amount for a single unit or multiple units directly into the provisional restoration. By saving time, materials, and money, ZONEfree helps to ensure cost-effective definite restoration success and high patient satisfaction.

Typical Protocol & Case Examples

ZONEfree is designed with high esthetics in mind, yet can be used universally as a provisional cement. The unique blend of esthetics, ideal retention, and chemical formula enable its use in a variety of situations, including full-arch temporaries, maxillary and mandibular anterior provisionals, and single units and bridges in either the anterior or posterior.

Splinted provisional restoration; Dentistry by Dr. Dory Stutman

ZONEfree works effectively as a provisional cement in multi-unit provisional cases. In the following full-arch rehabilitation case, a multi-unit, splinted provisional was placed using ZoneFree.

STEP 01 After the provisional restoration has been adapted, finished, and polished, it is ready for cementation.

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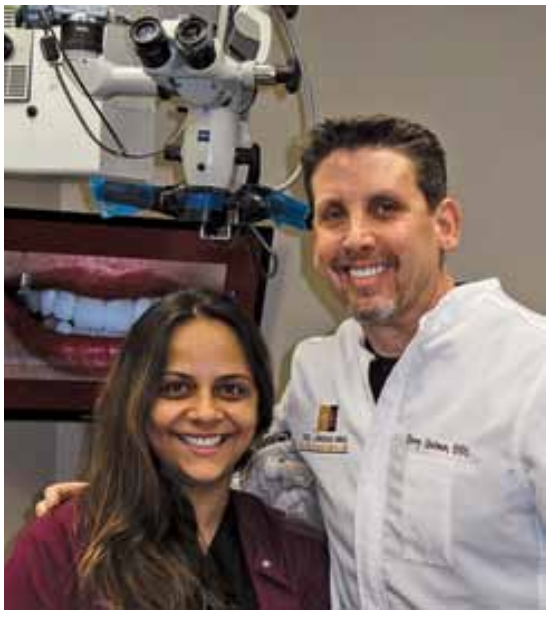

Dr. Dory Stutman and assistant Rihanna

STEP 02 Bleed the ZONEfree (DUX Dental) syringe until the material is fully mixed.

STEP 03 Load cement into the provisional restoration, completely coating the internal surfaces of the restoration without overloading it.

STEP 04 Seat the provisional restoration on the prepared teeth firmly.

STEP 05 Allow for the cement to set for 2 minutes. No light curing is necessary (**Fig. 3**).

STEP 06 After two minutes, a lubricant can be applied, and excess cement removed with a scaler.

STEP 07 Ensure that all residual temporary cement is removed (**Fig. 4**). Any remaining excess cement in the sulcus can irritate the periodontium and, in extreme cases, result in severe periodontal inflammation and potential bone loss.

STEP 08 Once all of the excess cement is removed, check the fit, occlusion, and comfort of the provisional restoration.

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Esthetic full-arch maxillary provisionalization; Dentistry by Dr. Robert Lowe

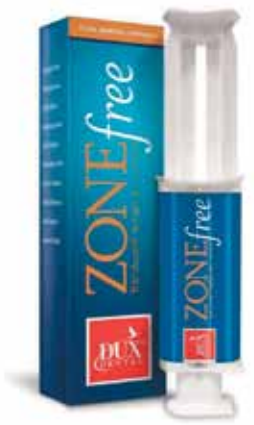
Another example of a multi-unit full-arch provisional restoration further demonstrates the universal application and esthetics of the Zonefree temporary cement.

STEP 01 After the existing preparations were refined (**Fig. 5**), a full-arch provisional restoration was created, after which it was loaded with Zonefree provisional cement and seated on the preparations.

STEP 02 During the placement process, it was important to hold the restoration with firm pressure while being set. This allowed for proper cementation (**Fig. 7**).

Single anterior provisionalization; Dentistry by Dr. Daniel Etheridge

The ability of ZONEfree to blend seamlessly makes it the ideal provisional cementation option for maxillary anterior lateral incisor temporaries, where esthetics matter most. In cases such as this that require a combination of single anterior provisional restorations, it is important to ensure the natural esthetics of the



ZONEfree

- Prismatic nanofillers offer unique color blending
- Zinc oxide non-eugenol, non-resin formula reportedly avoids any resin on resin issues
- Said to demonstrate excellent retention, strength and esthetics

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AT A GLANCE

1. ZONEfree is conveniently packaged in an automix delivery system.

2. The ZONEfree system allows dental professionals to correctly and easily dispense the proper amount of provisional cement.

3. ZONEfree cement is gently removed away from the margin with a scaler.

4. Preoperative occlusal view of a patient's original preparations.

5-6. Occlusal view of the provisional restoration following cementation using ZONEfree.

7. Retracted view of the completed maxillary full-arch provisionalization.

8. Retracted view of the lateral incisor preparations.

9. The provisionals were loaded with a Clear shade of ZONEfree cement.

10. Care was taken to ensure that the provisionals were overfilled with ZONEfree provisional cement.

11. The provisional restorations were seated into place, with excess cement allowed to escape along the margins.

12. The excess cement was removed from the restoration at tooth #10.

13. View of the completed anterior provisional restorations following clean-up.

14. View of the molar preparations to receive provisional restorations.

15. View of the provisional posterior full-coverage restorations.

16. The ZONEfree syringe was allowed to bleed until the material was fully mixed.

17. The Zonefree provisional cement was allowed to set for 2 minutes.

18. The excess temporary cement was removed from the lingual aspect using a scaler.

19. View of the completed posterior full-coverage provisional restorations.


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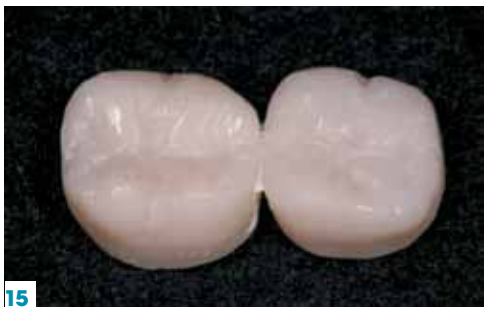
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Dr. Daniel Etheridge and assistants Natalie, Janice and Jennifer


Dr. Robert Lowe and assistants Heather and Ava

temporary. In this case, a patient presented with previously placed provisional restorations and a desire to brighten the shade of her teeth.

STEP 01 The previous provisional restorations on her lateral incisors were removed, and the preparations readied for placement of new provisional restorations (**Fig. 8**).

STEP 02 The provisionals were then loaded with a Clear shade of ZONEfree cement (**Fig. 9**), with care taken to overfill them with ZONEfree provisional cement (**Fig. 10**). The provisional restorations were seated into place, and excess cement was allowed to escape along the margins (**Fig. 11**).

STEP 03 The excess cement was then removed from the margins along the restoration at teeth #7 and #10 (**Fig. 12**). Additionally, any excess temporary cement was removed from the lingual aspect using a scaler and interproximally using floss. The completed anterior provisional restorations demonstrated a natural esthetic harmony with the adjacent teeth (**Fig. 13**).

Posterior temporaries; Dentistry by Dr. Robert Lowe

ZONEfree provisional cement is also ideal for posterior restorations, where ensuring the strength of the cement is essential. In posterior provisional restorations, ZONEfree provides flexibility, with its quick set time and no need for a curing light, which can often be awkward to use in hard-to-reach posterior areas.

Posterior provisional restorations follow the same protocol, allowing dentists ease in application and procedure.

STEP 01 In this case, preparations were completed on two mandibular molars (**Fig. 14**). The translucent shade of Zonefree cement was selected based on the color of the underlying tooth preparation and the shade of the provisional restoration (**Fig. 15**).

STEP 02 The ZONEfree syringe was allowed to bleed until the material was fully mixed (**Fig. 16**).

The cement was then loaded into the provisional restorations, completely coating the internal surfaces. The full-coverage provisional restorations were seated firmly onto the preparations, and the cement was allowed to set for 2 minutes. No curing light was necessary (**Fig. 17**).

STEP 03 Once set, excess provisional cement was easily removed with an explorer (**Fig. 18**), resulting in exceptionally esthetic posterior temporaries (**Fig. 19**).

Conclusion

The Contemporary Product Solutions evaluation team, consisting of dentists, assistants, hygienists, and patient coordinators across 17 dental practices, recently placed more than 176 provisional restorations using the Zonefree provisional cement. Over 62% of the restorations placed were posterior provisionals, and all but three evaluators used the transparent or translucent provisional cement. Almost all evaluators indicated that Zonefree demonstrated the ideal viscosity and flowability.

One dental team commented they loved the look of the Zonefree under their provisional restorations, while several team members noted they felt the Zonefree provisional cement blocked out dark underlying tooth structure without compromising esthetics.

With a wide variety of provisional cements available, selecting the ideal cement for provisional restorations is challenging. Unlike other cements, zinc-oxide non-eugenol provisional cements (i.e., Zonefree, DUX Dental) avoid many problems associated with using resin and eugenol based cements, including build-up removal and interference with definitive cementation. With convenient automix tubes, administering the ideal amount of cement into the provisional restorations is possible, eliminating mess and excess waste. Provisional cementation can impact not only the provisional restorations, but the final treatment success, so selection of an universal cement that avoids complications and ensures esthetics is indispensable. ●