FUSION-ZR™
DUAL CURE RESIN CEMENT

DESCRIPTION AND INTENDED USE:

FUSION-Zr™ Dual Cure Resin Cement is self-adhesive, tooth integrating, chemically bonds to all restorative materials and seals out microleakage. It is recommended for the permanent cementation of all-ceramic restorations, Zirconia, Feldspathic Porcelain, Lithium Disilicate and other CAD/CAM type materials, veneers, crown & bridge, inlays/onlays, PFM. The chemical composition of **FUSION-Zr™** includes adhesive acrylate resins (acidic monomer), inorganic nano and micron size fillers, which eliminates microleakage between the tooth surface and the restoration. **FUSION-Zr™** Dual Cure Resin Cement is a two-part auto mixing system, which will anaerobically chemical cure without light in 90 seconds and light cure in under 20 seconds. Light curing is recommended whenever possible. **FUSION-Zr™** is currently provided in Crystal Clear (for Accurate Visualization) and Opal White (for Natural Brightness) shades. It is recommended that enamel surfaces, which are uncut, be etched or micro-abraded to optimize bonding of this product to the dental surface. The surface of the restoration should also be pre-etched or abraded to optimize bonding of the restoration.

Silane and bonding agents can be used. Silane and bonding agents are not required.

DIRECTIONS FOR USE:

Important: Tooth surfaces should be clean, moist, and free of any contaminates. The tooth surface is to be acid etched, bonding agents are not required.

Veneer Placement on Dentin:
It is recommended that remaining enamel areas such as the margins or remaining facial/labial enamel be acid etched. Etched enamel should be left moist. After etching do not dessicate the tooth. At present, uncut enamel, such as margins or facial surfaces are optimally bonded using the acid etch technique. Dentin surfaces should be minimally etched. Bonding agents are not required. Bonding to poor quality dentin may be assisted by using bonding agents.

Veneer Placement on Enamel:
A restoration that is to be placed essentially onto enamel can be micro-abraded or acid etched. Optimum bonding to enamel is presently achieved through acid etching. Due to the self-adhesive properties of **FUSION-Zr™** cement, clinically sufficient bonding (>28 MPa) is achieved to etched enamel. Bonding agents are not required when bonding to enamel.

Zirconia Restorations:
Recommended for all Zirconia restorations. Zirconia varies greatly in transparency and can be opaque. The Dual Cure matrix allows for a full set in the case light does not penetrate. We do recommend Light curing the Dual cure matrix for easy clean-up (3 second tack cure) and also because there will be no oxygen inhibit layer left over.

Make sure the clinician follows all proper Zirconia prepping procedures to restore the phosphate groups lost during saliva contamination during try in.

Use of Try-In Gels:
The different Try-In Gels are formulated to indicate the final, cured color and opacity of the corresponding cement shade. The Try-In Gels are resin-based and have the same composition as the cement, however, the gels are not light sensitive. After use, the Try-In Gel should be carefully wiped off the surface of the veneer. A micro brush or cotton swab can be used. Do not use water to remove the gel. Some remaining gel, a very thin layer, is

acceptable and will be cured by the cement. If desired, alcohol can be used to remove the gel. Any remaining alcohol, should be air dried.

INSTRUCTIONS - Dual Cure - Step by Step:

1. **a.) Cementation to Ceramic Restorations:** The internal surface should be etched.
2. **b.) Cementation to Composite Restorations:** The internal surface should be roughened by bur or air abrade.
3. **c.) Cementation to Metal Restorations:** The internal surface should be roughened or treated with metal primers as required.
4. **d.) Cementation to Zirconia:** Follow all proper Zirconia prepping procedures to restore the phosphate groups lost during saliva contamination during try in.
5. Clean tooth; rinse thoroughly and lightly air dry.
6. Check the fit and esthetics of the restoration by trying in the restoration. If the fit and esthetics are acceptable, proceed directly to the bonding procedure using the Dual Cure cement. Place matrix bands between teeth to prevent bonding of excess cement to these teeth. Bonding agents may be used at this point but are not required, if used, a very thin application should occur and that the bonding agent not extend to any exposed margin. Do not cure the bonding agent at this point.
7. Apply cement directly onto the internal surface of the restoration. Avoid direct exposure of the cement to intense light. Smooth out the cement to reduce pressure on the restoration when seating the restoration. Gently seat the restoration onto the tooth. Clear the contacts with dental floss before curing is allowed and remove excess cement.
8. Light cure the margins for 20 seconds for each tooth surface. Curing may require greater time for larger restorations or those which are quite thick. Self-curing will proceed upon seating. FUSION-Zr™ Dual Cure Resin Cement will light cure in under 20 seconds and anaerobically set without light in 90 seconds.

WARNING:

- **For professional use by dental personnel only.**
- **Dual Cure Cement and Etchant may cause irritation to eyes and skin on contact. Take all necessary precautions to avoid contact with eyes and soft tissue. If materials contact eyes, rinse with water. If materials contact skin, wash skin with soap and water. Seek medical attention if irritation persists.**
- **Wear protective eyewear and gloves. Wash hands after use. Emergency eye wash fountain should be available.**

STORAGE:

- **Store tightly capped in original container at cool room temperature. Avoid direct sunlight and extremes of temperature. For long storage times please keep refrigerated.**
- **Shelf life of unopened product: 18 months from date of manufacture. Re-cap immediately after use.**
- **Designed to be used at room temperature between 65-70º F.**

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