

## DE™ CONNECTOR Light Cure Composite Resin

### Description:

DE™ Connector is a flowable, light cured bis-GMA base composite resin used during the stratification layering technique for direct placed restorations (or during the fabrication of indirect restorations). DE Connector is 50% filled by weight with a 0.7µm average particle size.

### Indications:

DE Connector is a new and unique concept created to reproduce the optical properties created by the naturally occurring protein layer found between dentin and enamel. DE Connector is placed after the final dentin layer, before layering enamel shades. DE Connector will increase the value of the final restoration.

### DE Connector is used for:

- Replicates the natural protein layer found between dentin and enamel
- Increases the internal light diffusion
- Increases the value of the shade



### Procedure:

1. Place DE Connector when internal "dentin" anatomy is completed, prior to placement of enamel shade(s). Remove luer lock cap from syringe and attach Black Micro® FX tip.
2. Apply a thin layer of DE Connector (not to exceed 0.1mm) over cured "dentin" composite surface.
3. Light cure 20 seconds if using the advanced Ultra-Lume™ LED 2 light, a quality halogen light, or 10 seconds if using a high energy light.
4. Place final shade(s) over cured DE Connector not to exceed 1.5 - 2mm.

Note: see Vit-I-escence™ instructions for complete usage.

5. Finish restoration using Ultradent's Polishing System.

### Precautions:

1. Uncured material will be deficient in physical properties, including strength, wear resistance, retention, marginal integrity, and color stability. Material that is insufficiently cured may also cause pulpal irritation. Use only quality curing units and check units periodically with a light meter.
2. Any resin can be sensitizing to skin or can cause allergic reaction if individual is already sensitized. Therefore, wash area exposed to resin completely to remove material. If dermatitis, rash, or any other allergic reaction is observed, contact a physician immediately.
3. Remember that composite resins are light activated. Syringe caps should be replaced immediately following use to prevent premature, partial or complete curing in syringe.

### Note:

1. Due to fluorescence and lower filler level, DE Connector should not be applied on the margin of the restoration.
2. After DE Connector has been light cured do not disturb oxygen inhibition layer. Proceed directly with enamel layering.
3. Although DE Connector has a milky appearance, appropriate hues, chromas etc. of underlying dentin composite will show through.

### THE TECHNIQUE

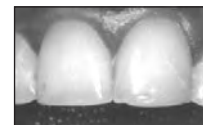


Fig. 1 Left midline central incisal (tooth #9) requires replacement of existing composite.

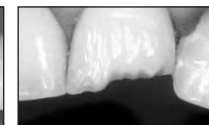


Fig. 2 Preparation.

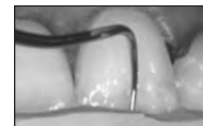


Fig. 3 Using dentin shade(s) build internal tooth structure. Light cure.

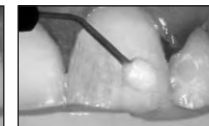


Fig. 4 Apply a thin layer of DE Connector on the cured dentin surface. Light Cure.

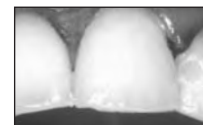
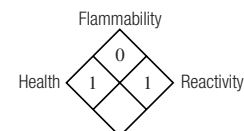


Fig. 5 Applied final enamel shade(s) over DE Connector. Light cure.



Fig. 6 Complete restoration.



**MSDS Included.**

### HAZARD RATING

4 = Severe 3 = Serious 2 = Moderate 1 = Slight 0 = Minimal

## DE™ CONNECTOR

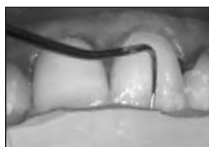
### EN-Light Cure Composite Resin/FR-Light Cure Composite Resin/ES-Light Cure Composite Resin/PT-Light Cure Composite Resin/JA-Light Cure Composite Resin/CH-Light Cure Composite Resin/KR-Light Cure Composite Resin



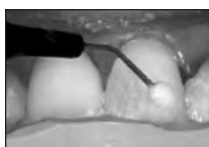
#### EN



Prepare tooth.



Internal dentin shade(s) has been bonded, layered etc...

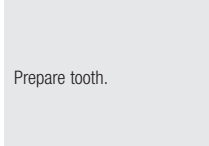


Apply thin layer (not to exceed 0.1mm) of DE Connector to "dentin" composite prior to "enamel" layering. Light cure 20 seconds if using the advanced Ultra-Lume™ LED 2 light, or a quality halogen light, or 10 seconds if using a high energy light.

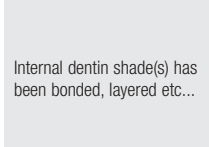


Placed enamel layering in increments.

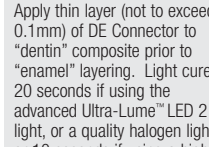
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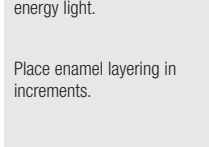
Prepare tooth.



Internal dentin shade(s) has been bonded, layered etc...

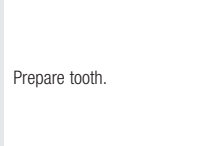


Apply thin layer (not to exceed 0.1mm) of DE Connector to "dentin" composite prior to "enamel" layering. Light cure 20 seconds if using the advanced Ultra-Lume™ LED 2 light, or a quality halogen light, or 10 seconds if using a high energy light.

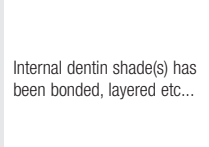


Place enamel layering in increments.

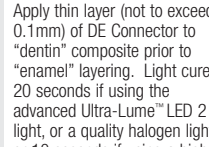
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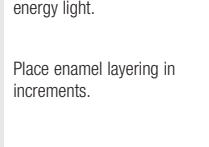
Prepare tooth.



Internal dentin shade(s) has been bonded, layered etc...

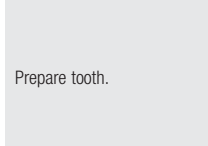


Apply thin layer (not to exceed 0.1mm) of DE Connector to "dentin" composite prior to "enamel" layering. Light cure 20 seconds if using the advanced Ultra-Lume™ LED 2 light, or a quality halogen light, or 10 seconds if using a high energy light.

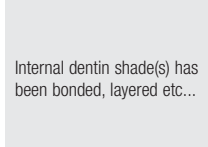


Place enamel layering in increments.

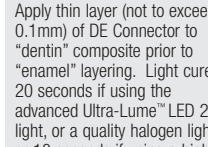
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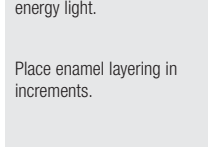
Prepare tooth.



Internal dentin shade(s) has been bonded, layered etc...

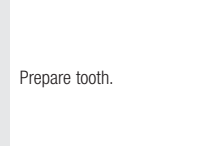


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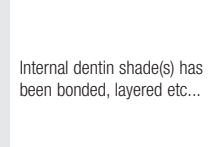


Place enamel layering in increments.

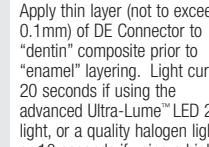
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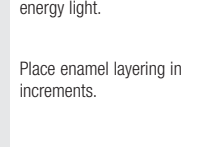
Prepare tooth.



Internal dentin shade(s) has been bonded, layered etc...

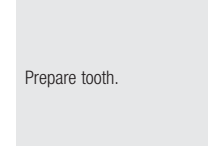


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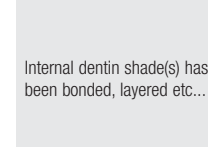


Place enamel layering in increments.

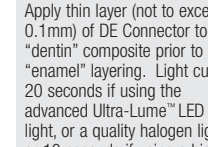
#### CH



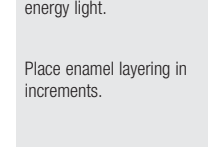
Prepare tooth.



Internal dentin shade(s) has been bonded, layered etc...

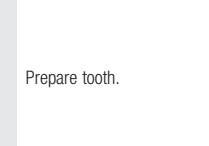


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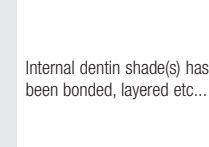


Place enamel layering in increments.

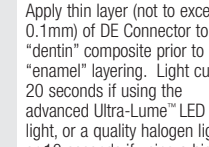
#### KR



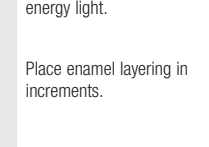
Prepare tooth.



Internal dentin shade(s) has been bonded, layered etc...



Apply thin layer (not to exceed 0.1mm) of DE Connector to "dentin" composite prior to "enamel" layering. Light cure 20 seconds if using the advanced Ultra-Lume™ LED 2 light, or a quality halogen light, or 10 seconds if using a high energy light.



Place enamel layering in increments.

**EN General Precautions:**

1. For Professional use only.
2. Review instructions, precautions, and MSDS before beginning treatment. Use only as directed.
3. Keep products out of heat/sunlight.
4. Avoid skin exposure to resins.
5. Isolate strong chemicals to area of treatment.
6. Confirm that patient has no known allergies to treatment materials.
7. Test flow of materials from syringe and tip before using intraorally.
8. Never force syringe plungers.
9. Use Ultradent® Syringe Covers and/or clean and disinfect syringes between patients.
10. Use standard curing lights with all light polymerized/activated materials.

**FR Précautions générales:**

1. Exclusivement réservé à l'usage professionnel.
2. Voir les instructions, les précautions et la notice de sécurité avant le traitement. Utiliser uniquement selon les instructions.
3. Tenir les produits à l'abri de la lumière du soleil et de la chaleur.
4. Éviter le contact des résines avec la peau.
5. Limiter l'application des produits aux seules zones de traitement.
6. S'assurer que le patient ne présente aucune allergie aux produits utilisés lors du traitement.
7. Tester le débit des matériaux à travers les seringues et les embouts d'application avant toute utilisation intra-buccale.
8. Ne jamais forcer sur le piston des seringues.
9. Utiliser les couvre-seringues Ultradent® et/ou nettoyer et désinfecter les seringues après utilisation.
10. Utiliser une lampe à photopolymériser standard avec les matériaux photopolymérisables ou photoactivables.

**ES Precauciones Generales:**

1. Para uso exclusivo de Profesionales.
2. Antes de empezar el tratamiento, revise las instrucciones, precauciones y el MSDS. Siga las instrucciones.
3. Siempre mantenga los productos alejados del calor y de la luz solar.
4. Evite el contacto de las resinas con la piel.
5. Aisle los químicos fuertes del área de tratamiento.
6. Asegúrese que el paciente no es alérgico a los materiales.
7. Antes de usar en la boca, verifique que los materiales fluyan de la jeringa y la punta.
8. Nunca empuje con fuerza el émbolo.
9. Use las cubiertas para jeringas de Ultradent y/o limpie y desinfecte las jeringas entre pacientes.
10. Utilice luces de fotocurado corrientes con todos los materiales activados/polimerizados con luz.

**PT Precauções gerais:**

1. Somente para uso profissional.
2. Ler instruções, precauções e MSDS antes de começar o tratamento. Utilizar só como indicado.
3. Manter os produtos longe do calor e da luz solar directa.
4. Evitar contacto com a pele.
5. Aplicar substâncias químicas fortes só na área de tratamento.
6. Confirmar se os pacientes não tem alergias aos materiais utilizados.
7. Testar o escoamento dos materiais através da seringa e ponta antes da aplicação intraoral.
8. Nunca forçar os êmbolos da seringa.
9. Utilizar protectores de seringa Ultradent e/ou desinfectar seringas entre cada tratamento.
10. Utilizar luzes de polimerização standard com todos os materiais fotopolimerizáveis.

**JA General Precautions:**

1. For Professional use only.
2. Review instructions, precautions, and MSDS before beginning treatment. Use only as directed.
3. Keep products out of heat/sunlight.
4. Avoid skin exposure to resins.
5. Isolate strong chemicals to area of treatment.
6. Confirm that patient has no known allergies to treatment materials.
7. Test flow of materials from syringe and tip before using intraorally.
8. Never force syringe plungers.
9. Use Ultradent® Syringe Covers and/or clean and disinfect syringes between patients.
10. Use standard curing lights with all light polymerized/activated materials.

**CH General Precautions:**

1. For Professional use only.
2. Review instructions, precautions, and MSDS before beginning treatment. Use only as directed.
3. Keep products out of heat/sunlight.
4. Avoid skin exposure to resins.
5. Isolate strong chemicals to area of treatment.
6. Confirm that patient has no known allergies to treatment materials.
7. Test flow of materials from syringe and tip before using intraorally.
8. Never force syringe plungers.
9. Use Ultradent® Syringe Covers and/or clean and disinfect syringes between patients.
10. Use standard curing lights with all light polymerized/activated materials.

**KR General Precautions:**

1. For Professional use only.
2. Review instructions, precautions, and MSDS before beginning treatment. Use only as directed.
3. Keep products out of heat/sunlight.
4. Avoid skin exposure to resins.
5. Isolate strong chemicals to area of treatment.
6. Confirm that patient has no known allergies to treatment materials.
7. Test flow of materials from syringe and tip before using intraorally.
8. Never force syringe plungers.
9. Use Ultradent® Syringe Covers and/or clean and disinfect syringes between patients.
10. Use standard curing lights with all light polymerized/activated materials.

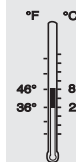
ULTRADENT PRODUCTS, INC. MATERIAL SAFETY DATA SHEET			
Controlled Product <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<b>SECTION I - IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING</b>			
Material Name <b>CONNECTOR</b>	Manufactured by Ultradent Products, Inc. 505 West 10200 South South Jordan, Utah 84095 USA		
Material Use Light Cure Composite Resin	Emergency Contact 1-800-552-5512 or 1-801-572-4200 (Outside USA)		
Date February 22, 2002	EC Representative		
Prepared by: Peter Allred, Chemist			
<b>SECTION II - COMPOSITION/INFORMATION ON INGREDIENTS</b>			
Active Ingredients	Approximate Concentration %	LD <sub>50</sub> /LC <sub>50</sub> Specify Species and Route	C.A.S. N.A. or U.N. Numbers
Bis-GMA		Not established.	1565-94-2
<b>SECTION III - HAZARDS IDENTIFICATION</b>			
Adverse Human Effects and Symptoms None			
<b>SECTION IV - FIRST AID MEASURES</b>			
Inhalation	None.	Eye Contact	Clean with water or saline.
Skin Contact	Wash with soap and water.	Ingestion	None.
<b>SECTION V - FIRE-FIGHTING MEASURES</b>			
Flammability Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> If Yes, Under Which Conditions: Flammable only under very high temperatures.			
Means of Extinction Water fog, alcohol foam, CO <sub>2</sub> , dry chemical.		Protective Equipment for Firefighters Standard fire fighting equipment.	
<b>SECTION VI - ACCIDENTAL RELEASE MEASURES</b>			
Personal & Environmental Precautions None.		<b>SECTION VII - HANDLING AND STORAGE</b>	
Methods for Cleaning Wipe up with dry cloth.		Handling Precautions Avoid high temperature storage.	
		Storage Requirements Refrigerate resins not used on a daily basis.	
<b>SECTION VIII - EXPOSURE CONTROLS/PERSONAL PROTECTION</b>			
Respiratory Protection N/A		Eye Protection N/A	
Hand Protection Latex gloves.		Skin Protection Lab coat.	
<b>SECTION IX - PHYSICAL &amp; CHEMICAL PROPERTIES</b>			
Appearance Viscous resin.		Solubility in Water N/A	
Odor Odorless.		Melting Point/Range N/A	
pH N/A		Other Data None.	
<b>SECTION X - STABILITY AND REACTIVITY</b>			
Chemical Stability Conditions and Materials to Avoid Light exposure initiates polymerization.			
Hazardous Decomposition Products CO <sub>2</sub>			
<b>SECTION XI - TOXICOLOGICAL INFORMATION</b>			
Route of Entry <input type="checkbox"/> Skin Contact <input checked="" type="checkbox"/> Skin Absorption <input checked="" type="checkbox"/> Eye Contact <input type="checkbox"/> Inhalation Acute <input type="checkbox"/> Inhalation Chronic <input type="checkbox"/> Ingestion			
Effects and Symptoms of Short-Term Exposure Eye: Slight irritation.			
Chronic Effects and Symptoms of Long-Term Exposure Eye: Mild irritation. Skin: Slight irritation.			
Sensitization N/A			
<b>SECTION XII - ECOLOGICAL INFORMATION</b>		<b>SECTION XIII - DISPOSAL CONSIDERATIONS</b>	
Biodegradability Not established.		Method of Waste Disposal In accordance with government regulations.	
Further Details None.			
<b>SECTION XIV - TRANSPORT INFORMATION</b>		<b>SECTION XV - REGULATORY INFORMATION</b>	
Not regulated.		Not defined.	
<b>SECTION XVI - OTHER INFORMATION</b>			
FOR DENTAL USE ONLY. Use as directed. The information and recommendations are taken from sources (raw material MSDS(s) and manufacturer's knowledge) believed to be accurate; however, Ultradent Products, Inc., makes no warranty with respect to the accuracy of the information or the suitability of the recommendation and assumes no liability to any user thereof. Each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.			

**Key:****Explication:****Clave:****Legenda:****Key:****Explication:****Clave:****Legenda:**

Keep out of reach of children.  
Keep out of reach of children.  
Keep out of reach of children.

Keep out of reach of children.  
Tenir hors de portée des enfants.  
Manténgase fuera del alcance de los niños.  
Manter fora do alcance das crianças.  
Keep out of reach of children.

Destroy after use.  
Détruire après utilisation.  
Destruýalo después de usarlo.  
Destruir após usar.  
Destroy after use.  
Destroy after use.  
Destroy after use.



Recommended storage temperature.  
Température de Stockage Recommandée.  
Temperatura recomendada para almacenamiento.  
Temperatura de armazenagem aconselhada.  
Recommended storage temperature.  
Recommended storage temperature.  
Recommended storage temperature.

Dentist Dispensed.  
Distribué par le chirurgien dentiste.  
Administrado por el Dentista.  
Administrado pelo dentista.  
Dentist Dispensed.  
Dentist Dispensed.  
Dentist Dispensed.

Not for injection.  
Ne pas injecter.  
No debe inyectarse.  
Não injectar.  
Not for injection.  
Not for injection.  
Not for injection.

Ultradent syringes have an expiration date stamped on the side of the syringe consisting of one letter and three numbers. The letter is a lot number used for manufacturing purposes and the three numbers are the expiration date. The first two numbers are the month, and the third number is the last number of the year.

**U.S. federal law restricts this device to sale by or on the order of a dentist.**

**Refrigerate if not used on a daily basis.**

**Shelf life: 60 months**

For immediate reorder and/or complete descriptions of Ultradent's product line, refer to Ultradent's catalog or call Toll Free **1-800-552-5512**. Outside U.S. call (801) 572-4200 or visit [www.ultradent.com](http://www.ultradent.com).