

3M™ Scotchbond™ Universal Plus
Adhesive

Frequently Asked Questions



Features & Benefits

▼ 1. What are the main features and benefits of 3M™ Scotchbond™ Universal Plus Adhesive?

- Suitable for all direct and indirect indications
- Suitable for all etching techniques
- Adheres to all dental surfaces including restoration materials without the need for a separate primer
- Bonds all restorative materials without the need for separate primers
- First radiopaque universal adhesive with dentin-like radiopacity
- Bonds and seals caries-affected tissue and dentin
- Advanced bonding to dental and restorative substrates, including glass ceramics
- No separate dual-cure activator needed
- Available in vial and unit dose for efficient hygiene management
- Virtually no post-operative sensitivity
- BPA derivative-free formulation



Properties

▼ 1. How is it different from its predecessor 3M™ Scotchbond™ Universal Adhesive?

- 3M™ Scotchbond™ Universal Plus Adhesive is built on the platform of Scotchbond Universal Adhesive, the clinically proven and most researched universal adhesive.
- Careful adjustments have been made to allow for the new benefits of radiopacity, BPA derivative-free formulation, improved bond strength to glass ceramics and improved dual-cure compatibility.

3M™ Scotchbond™ Universal Adhesive	3M™ Scotchbond™ Universal Plus Adhesive
MDP Phosphate Monomer	△ Same gold standard adhesive monomer
HEMA	△ Same hydrophilic monomer for wetting dentin
3M™ Vitrebond™ Copolymer	△ Same 3M proprietary technology for moisture tolerance
Filler	△ Same non-settling silica filler for adjusting viscosity and handling
Ethanol/water	△ Same solvent, adjusts viscosity, wetting of tooth structure
Initiators	△ Same photoinitiators based on camphorquinone
Silane	Optimized mixture of silanes for improved bond strength to glass ceramic
Dual-cure Activator (DCA) (separate vial)	Dual-cure accelerator for improved dual-cure compatibility – no more mixing with DCA from a separate vial
Dimethacrylate resins containing BisGMA	Dimethacrylate resins contain a BPA derivative-free , crosslinking radiopaque monomer – does not contain BisGMA (which is based on BPA)

Overview of chemical composition of 3M™ Scotchbond™ Universal Plus Adhesive in comparison to 3M™ Scotchbond™ Universal Adhesive

▼ 2. Can I use Scotchbond Universal Plus Adhesive with my composite or cement (non 3M product)?

Yes, it is compatible with light-, dual-, and self-cure composite filling materials, cements and core build-ups.

▼ 3. When using Scotchbond Universal Plus Adhesive with a cement other than 3M™ RelyX™ Universal Resin Cement, do you need to light cure Scotchbond Universal Plus Adhesive before applying the cement?

Yes. Only RelyX Universal Resin Cement initiates and cures Scotchbond Universal Plus Adhesive.



Properties

▼ 4. Is the viscosity different and if so, how?

3M™ Scotchbond™ Universal Plus Adhesive has a slightly lower viscosity than 3M™ Scotchbond™ Universal Adhesive. However, most participants in an 8-week clinical field evaluation with over 120 dentists from Europe and the US did not notice the change in viscosity.

▼ 5. Does the yellowish color of the adhesive completely disappear after curing?

Yes. The yellow color comes from the camphorquinone photoinitiator. It provides good visibility on the tooth during application. Upon air drying and light curing, the yellow color fully disappears and does not come back.

▼ 6. Why do I need to rub in Scotchbond Universal Plus Adhesive for 20 seconds?

Rubbing for 20 seconds is required in order to ensure optimum performance. Active application or rubbing has been shown to increase bond strength for a variety of universal adhesives.*

Since functional monomers like MDP need time to react with the tooth, a shortened application time can reduce bond strength.**

* Source: P. Saikaew et al.: Does shortened application time affect long-term bond strength of universal adhesives to dentin?, Oper Dent. 2018 43, 549-558)

** Source: AD Loguercio et al. : Does active application of universal adhesives to enamel in self-etch mode improve their performance?, J Dent 2015, 43, 1060-1070

▼ 7. Is it stable over time and will all components remain reactive at the solution's pH?

Yes. It can be stored for 36 months at room temperature or in a refrigerator. No shaking needed.

▼ 8. Is the silane in Scotchbond Universal Plus Adhesive stable?

Yes. Scotchbond Universal Plus Adhesive contains an optimized proprietary combination of silanes for high bond strength to all dental materials including glass ceramics throughout its shelf life.

▼ 9. What is the adhesive's radiopacity and how does that help with treatment?

Scotchbond Universal Plus Adhesive has a radiopacity like dentin of about 100% aluminum. This minimizes the risk of misdiagnosing a thicker adhesive layer (pooling) as secondary caries, marginal gaps or voids.



Properties

▼ 10. Does it work on caries-affected dentin? If so, how? Is the caries arrested?

Yes. Scotchbond Universal Plus Adhesive seals and bonds caries-affected dentin by forming a well-defined void-free hybrid layer. Research has shown that sealing in remaining bacteria and blocking them from nutrients stops caries from progressing.

Source: E. A. M. Kidd: Clinical Threshold for Carious Tissue Removal, Dent Clin N Am 2010, 54, 541-549

▼ 11. What properties contribute to achieving virtually no post-op sensitivity in total-etch mode?

Like its predecessor, Scotchbond Universal Plus Adhesive has been optimized for high moisture tolerance (high bond strength at varying moisture levels). It forms a continuous, well defined hybrid layer without gaps or voids, which means the dentin is well sealed and open tubules are closed. 3M's patented 3M™ Vitrebond™ Copolymer has been shown to contribute to high bond strength to even dry, etched dentin.

Source: C Thalacker, R Guggenberger, A Syrek, H Loll, D Krueger: Influence of 3M™ Vitrebond™ Copolymer on bonding to dry etched dentin, IADR 2010, #2937

▼ 12. Can I use it for porcelain repair?

Yes, it bonds to all dental surfaces without the need for an additional primer.

▼ 13. Is it effective in both total- and self-etch techniques?

Like its predecessor, Scotchbond Universal Plus Adhesive has been developed as a universal adhesive, optimizing bond strength on etched and unetched enamel and dentin.

▼ 14. Can I use the self-etch method when bonding a veneer?

Since veneers are predominantly bonded to enamel and can be subject to high forces when biting into hard food, we recommend etching in order to maximize enamel bond strength. Also, etching the enamel minimizes the chance for marginal discoloration.

Source: T. Burke et al.: What's New in Dentine Bonding? Universal Adhesives, Dent. Update. 2017, 328-337

▼ 15. Do I have to use 3M™ Scotchbond™ Universal Etchant Etching Gel with this adhesive?

No. Any common phosphoric acid etching gel (about 30–40%) can be used.



Properties

▼ 16. Why is it indicated to use without etching on uncut enamel with a sealant, but not in other restorations?

The bond strength needed for a sealant is not as high as for a composite filling, as sealants are located in fissures outside the reach of occlusal forces (and are worn quickly anyway if they are on an occlusal surface). Fillings can be subject to occlusal forces – therefore it is advisable to maximize bond strength by etching if the filling extends over uncut enamel.

▼ 17. Does it bond to amalgam?

The bond strength of amalgam to a cured methacrylate based formulation is very low – that is why amalgam fillings still have to be placed in a retentive cavity preparation, regardless if the cavity has been treated with an adhesive or not. 3M™ Scotchbond™ Universal Plus Adhesive is not indicated for bonding amalgam, however it is indicated for sealing the cavity prior to placing amalgam to prevent post-operative sensitivity. On the other hand, Scotchbond Universal Plus Adhesive has high bond strength to cured amalgam (e.g. if part of a core preparation).



Delivery Systems

▼ 1. What is new about the 3M™ Scotchbond™ Universal Plus Adhesive delivery systems?

- Streamlined vial with smooth surface and edges
- Tamper seal for added safety
- Reduces the environmental footprint by more than 18% compared to 3M™ Scotchbond™ Universal Adhesive because of:
 - No more rubber gasket in cap
 - No need for additional bottle of activator to accomplish self-cure
 - Less plastic needed compared to predecessor bottle
- Also available in unit-dose (L-Pop) for efficient hygiene management



▼ 2. How many applications are there in each delivery system?

- Each vial contains 5 ml ~ 200 drops of 0.025 ml
- Each unit dose (L-Pop) contains 0.11 ml ~ 0.12 g

▼ 3. Do I need to shake the Scotchbond Universal Plus Adhesive vial before use?

No shaking is needed. The radiopacity in Scotchbond Universal Plus Adhesive is achieved via a novel radiopaque resin, not by conventional radiopaque filler particles, which might settle from the liquid.

▼ 4. How should I store the Scotchbond Universal Plus Adhesive vial between uses?

The vial lid should be closed immediately after dispensing and between uses to avoid the risk of cross-contamination and to help protect the shelf life of the material.

▼ 5. What is the shelf life and recommended storage condition?

- 36 months at 2–25 °C/36–77 °F.
- Do not use after the expiration date.
- Vial cap should be closed between uses.

▼ 6. Is refrigeration during storage required?

No refrigeration is required if room temperature does not exceed 25°C/77°F.



Handling Procedure – Material Application

▼ 1. What are the indications for use?

Indirect Indications:

- Cementation of indirect restorations in combination with 3M™ RelyX™ Universal Resin Cement and other resin cements (follow applicable Instructions for Use)
- Bonding for all methacrylate-based light-, self-, and dual-cure core build-up materials and cements
- Cementation of veneers when combined with 3M™ RelyX™ Veneer Cement
- Intraoral repair of composite restorations, porcelain fused to metal, and all-ceramic restorations without extra primer
- Sealing of cavities and preparation of tooth stumps prior to temporary cementation of indirect restorations

Direct Indications:

- Bonding for all methacrylate-based light-, dual-, and self-cure composite or compomer filling materials
- Root surface desensitization
- Bonding of methacrylate-based fissure sealants
- Protective varnish for glass ionomer fillings
- Repair of composite and compomer fillings
- Sealing of cavities prior to placement of amalgam restorations



Handling Procedure – Material Application

▼ 2. How do I apply 3M™ Scotchbond™ Universal Plus Adhesive for different indications?

Indications:

- Bonding of dual-cure cements and core build-up materials and self-cure composites
- Direct light cure restoration
- Intraoral repair
- Sealing of cavities prior to amalgam restorations
- Sealing of cavities and stump preparations prior to temporary cementation of indirect restorations



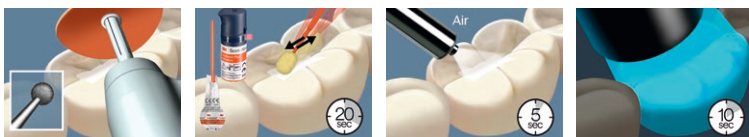
Indication:

- Bonding of fissure sealants



Indication:

- Protective varnish for glass ionomer fillings



Indication:

- Root surface desensitization





Scientific Data

▼ 1. What clinical data is available?

In a field evaluation with over 300 dentists from the US and Europe, Scotchbond Universal Plus Adhesive was used in vivo with over 20,000 applications. The feedback was extremely favorable, regardless whether they had previously used Scotchbond Universal Adhesive or a competitive adhesive.

Cleaning & Disinfection

▼ For cleaning and disinfection please refer to the product's Instructions for Use and Guidelines for Infection Control.