Shasta Dental SUPPLY
A TriMan Dental Supplies, Inc. Company

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CLEARFIL PHOTO BOND Cheat Sheet

CLEARFIL PHOTO BOND

The world's only dual-cure bonding agent that can simultaneously bond to Enamel, Dentin, Metal, Zirconia, Porcelain and Cured Composite in a single application.

CLEARFIL PHOTO BOND is a dual-cure adhesive for enamel and dentin, based on the total-etch technique. **CLEARFIL PHOTO BOND** has been developed for use with light-cure and dual-cure restorative materials. In addition, direct adhesion to ceramic can be achieved by mixing with **CLEARFIL PORCELAIN BOND ACTIVATOR**.

Features & Benefits
- Total-etch, dual-cure system
- High enamel bond strength
- Bonds to multiple surfaces in a single application
- Simple and very easy to use
- Does not require HF acid for porcelain repair
- Film thickness: 1-5 microns
- Clinically proven since 1984

Multiple Applications!
- Porcelain, cured composite & PFM repair
- Endo access restorations
- Porcelain veneer bonding
- Post and core bonding
- Amalgam bonding
- Ortho (bonding brackets to porcelain)
- Bonding to existing composite
- Slows set time of Panavia F 2.0

Optional Accessories

K-Etchant Gel
Etching gel used for etching enamel, dentin, porcelain and cured-composite for adhesive restorations.

CLEARFIL SA Primer
Adhesion primer for dentin that stablizes exposed collagen fibers so Photo Bond, can penetrate and seal dentin.

CLEARFIL Porcelain Bond Activator
Silane coupling agent, that is mixed with PHOTO BOND guarantees a strong adhesion to porcelain and cured composite restorations. No HF Acid.

Alloy Primer
Apply to sandblasted gold or other precious or semi-precious metals to enhance bond strength.

Katana Cleaner
*Used after try-in to restore the restorations clean surface by removing blood and saliva contamination. Safe to be used intra-orally.

Porcelain Repair

Standard Prep Method

1a. Sandblast with Aluminum Oxide using a MicroEtcher to roughen and increase the bondable surface area.
2a. Etch with SureEtch 37% phosphoric acid liquid. Wait 15 seconds, wash and dry.
3a. If precious or semi-precious metal is exposed use Alloy Primer and air dry. Go to step 4.

SilJet Prep Method if Metal is Exposed (skip above steps)

1b. Affix the SilJet Powder to a MicroEtcher. Surface should be clean and dry.
2b. Direct the SilJet powder stream perpendicularly onto the target surface from a distance from 5-10mm. Coat entire restorative surface evenly. Blasting time is usually 15 seconds.
3b. Apply air for 5 seconds to remove residual powder.

Restorative Steps

4. Mix Clearfil Photo Bond with Clearfil Porcelain Bond Activator. One drop each. (Mix A+C then U)
5. Apply mixture to restorative surface and leave for 5 seconds.
6. Gently air dry for 2-3 seconds to evaporate the solvent. Light cure.
7. Exposed metal; apply composite opaquer such as Accolade OP Mask. Light cure 40 seconds.
8. Apply a thin layer of Bulk EZ PLUS and allow it to self-cure for 90 seconds then apply your final layer of light-cure restorative composite such as Estelite Sigma Quick or similar. Finish and polish.

Zirconia Repair: skip step 2a use Katana Cleaner* and do not use Clearfil Porcelain Bond Activator in step 4.

Endo Access Repair PFM

1. Sandblast with Aluminum Oxide using a MicroEtcher or roughen with a bur.
2. Etch with SureEtch 37% phosphoric acid liquid. Wait 15 seconds, wash and dry.
3. Mix Clearfil Photo Bond with Clearfil Porcelain Bond Activator. One drop each. (Mix A+C then U)
4. Apply mixture to restorative surface and leave for 5 seconds.
5. Gently air dry for 2-3 seconds to evaporate the solvent. Light cure.
6. Exposed metal; apply composite opaquer such as Accolade OP Mask. Light cure 40 seconds.
7. Fill endo access with Bulk EZ PLUS and allow it to self-cure for 90 seconds. If desired, cap Bulk EZ PLUS with a light-cure restorative composite such as Estelite Sigma Quick or similar. Finish and polish.

Zirconia Crown: skip step 1 & 2 use Katana Cleaner* and do not use Clearfil Porcelain Bond Activator in step 3.

Silane Treatment Procedure for Ceramic Restorations

1. After try-in sandblast with Aluminum Oxide using a MicroEtcher or use Katana Cleaner.
2. Etch restoration with SureEtch 37% phosphoric acid liquid. Wait 15 seconds, wash and dry.
3. Mix Clearfil Photo Bond with Clearfil Porcelain Bond Activator. One drop each. (Mix A+C then U)
4. Apply mixture to restoration and leave for 5 seconds.
5. Gently air dry for 2-3 seconds to evaporate the solvent. Proceed with cementation steps.

Zirconia Treatment by applying MDP

1. After try-in sandblast with Aluminum Oxide using a MicroEtcher or use Katana Cleaner.
2. Mix Clearfil Photo Bond, one drop each.
3. Apply mixture to restoration and leave for 5 seconds.
4. Gently air dry for 2-3 seconds to evaporate the solvent. Proceed with cementation steps.

Cements such as Panavia 21, Panavia F 2.0 and Panavia SA Cement contain MDP and only require step 1.

Direct Shrinkage Technique for Posterior Composite Placement

Classic technique taught before self-etch primers were introduced, and still popular today.
By: Ray Bertolotti, DDS

During light curing of composites, it is well known that light initiated polymerization tends to pull composite toward the light and away from the composite-tooth interface. In the "Directed Shrinkage" technique for composite placement, the composite polymerization is initiated by the bonding agent (Clearfil Photo Bond) in the prepared cavity. The polymerization shrinkage is initiated and directed toward the tooth-composite interface. This initially polymerized layer resists the further tendency for the composite to pull away from the interface, influenced by light curing. Chemical cure is generally the preferred mode of cure for the initial stages of polymerization. A reduced rate of cure reduces stress in the composite and results in better margins. Dual-cure is generally believed to result in better polymerization and enhanced properties.

1. Etch preparation with SureEtch 37% phosphoric acid liquid. Wait 15 seconds, wash and dry.
2. Apply a desensitizer such as MicroPrime. Wait 30 seconds. Gently air dry.
3. Mix Clearfil Photo Bond, one drop each.
4. Apply mixture to restorative surface and leave for 5 seconds.
5. Gently air dry for 2-3 seconds to evaporate the solvent. Light cure and apply the matrix.
6. Apply the dual-cure flowable composite such as StartFill 2B or Bulk EZ PLUS. Fill and let self-cure.
7. If desired cap with a final layer of light-cure restorative composite, Estelite Sigma Quick. Finish and polish.

StartFill 2B & Bulk EZ PLUS can be used to cement posts, create core build-ups and used for cementatation procedures.