

CLEARFIL™ S³ BOND

[Clearfil tri-S bond]



SIMPLICITY

ALL-IN-ONE Bonding System

CLEARFIL™ S³ BOND works as both self-etching primer and bonding agent. CLEARFIL™ S³ BOND dramatically shortens your working time of all steps of etching, priming and bonding.

1. As self-etching primer

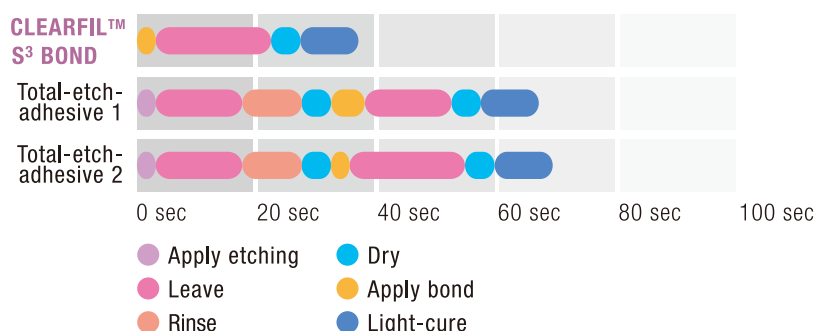
Penetration and decalcification to enamel/dentin

- Dissolution of smear layer
- Adhesive monomer penetration into enamel/dentin
- Mechanical retention by decalcified uneven surface structure
- Leading bonding element into enamel/dentin

2. As bonding agent

Strong capsule formation

- Coating decalcified enamel/dentin

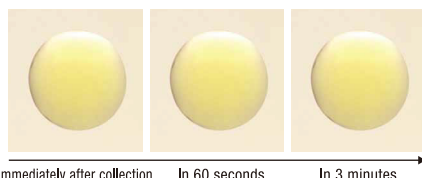


No hidden work steps with CLEARFIL™ S³ BOND. Here in comparison with two total-etch adhesives.

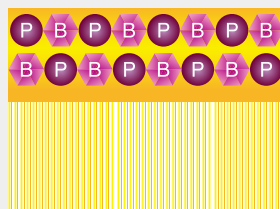
SURENESS

1. CLEARFIL™ S³ Bond keeps its uniformity of components

Hydrophilic & hydrophobic components are homogeneously linked even after its application. Kuraray Medical Inc.'s Molecular Dispersion Technology makes this possible. This technology promotes stable formation of hybrid layer.

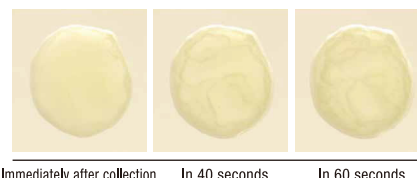


The primer and bonding substances infiltrate together into enamel/dentin surface. This helps decalcification as well as penetration of adhesive and cross-linking monomer for further stability and durability of enamel/dentin and bond layer.

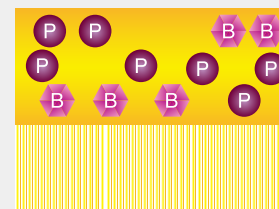


- hydrophilic components, primer function
- hydrophobic components, bonding function

A sample of bonding agent whose components become isolated after dropping



Effective penetration and decalcification do not occur if primer and bonding components disconnect their linkage.



- hydrophilic components, primer function
- hydrophobic components, bonding function

2. Liquidity & thin bond layer

As CLEARFIL™ S³ Bond has moderate viscosity, it is able to remain on vertical surface. This provides sufficient processing time for penetration & decalcification to enamel/dentin as a primer, and adhesion for even application to cavity as a bond.



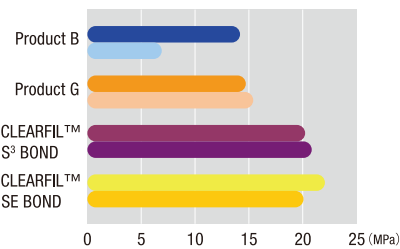
A Bond drop on a vertical surface of mixing paper left for 30 seconds



Formed by high-pressure air flow according to the Instruction for Use.

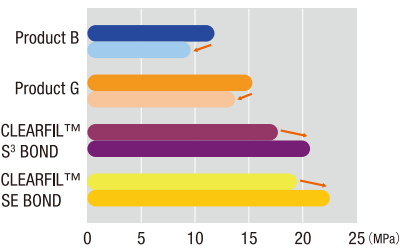
STRENGTH

Tensional stiffness to enamel



Each product's upper bar : 37°C, 1 day
Each lower bar : after thermal cycle test for 4,000 times

Tensional stiffness to dentin

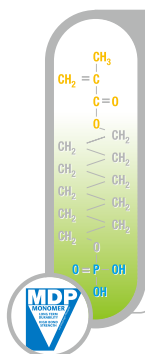


Each product's upper bar : 37°C, 1 day
Each lower bar : after thermal cycle test for 4,000 times

Kuraray's MDP Monomer

An essential component of CLEARFIL™ S³ BOND is MDP, an adhesive monomer patented by Kuraray with 20 years' worth of scientifically verified, outstanding bonding performance. The special molecular structure of MDP generates a mild demineralizing effect. And even though the acidity of CLEARFIL™ S³ BOND

is mild, the bond strength results are excellent, even to enamel, thanks to the chemical bond of MDP to hydroxyapatite. Hence, a Calcium-MDP complex is formed that is extraordinarily effective against dissolving, forming the basis for its high resistance to chemical and thermal degradation.



Structure of adhesive monomer MDP

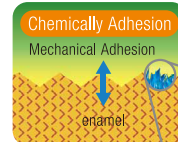
Polymerizable group

Hydrophobic group

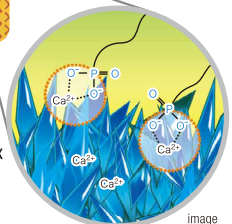
Hydrophilic group

Forming the chemical bond with calcium and hydroxylapatite

CLEARFIL™ S³ BOND



Calcium-MDP complex



image

Quick & simple application



1. Apply bond for 20 sec.



2. Dry with high pressure air flow for more than 5 sec.



3. Light-cure for 10 sec.
(Curing time by Halogen/LED)



4. Fill light-curing CR

Intraoral repairs of fractured crowns/bridges made of porcelain or composite resin

Usable with Porcelain Bond Activator for intra-oral repair and prosthesis repair in their pre-application process



1
Roughen, rinse,
and dry the surface.



2
Phosphoric acid etching
for 5 seconds,
then rinse and dry.



3
In case of precious metal
surface, metal adhesive
primer should be
applied.



4
Apply the mixture of CLEARFIL™ S³ Bond and
Porcelain Bond Activator to the surface by
sponge. Dry with high pressure
air flow for 5 seconds, or 20
seconds in case of dentine as ethanol and water must volatile.



5
Light cure
for 10
seconds.



6
Fill light-curing
CR.

- Read the Instruction for Use supplied with the product before use.
- The measurement data contained in this brochure are obtained by the results of tests performed by Kuraray Noritake Dental Inc.
- The colors of the product pastes and hardened products shown in this brochure may vary from the actual colors.
- The specifications and appearance of the product are subject to change without notice.

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