

# ALL-BOND 3 (BISCO)



Final grade: 8,3



## PRODUCT DESCRIPTION :

The gold standard of total-etch dental adhesive systems. ALL-BOND 3 is a fourth-generation dental adhesive system that produces micromechanical bonding to substrates. It is used for all bonding procedures, compatible with chemical, dual and light-cure materials and used without any additional activators. Fewer and thinner coats have to be applied because of its ethanol-based formula and hydrophobicity. ALL-BOND 3, a hydrophobic adhesive formulated with highly-crosslinking monomers, ensures greater bonding durability.

ALL-BOND 3 resin is a hydrophobic and radiopaque bonding resin. Its radiopacity outlines restorations, thus reducing the risk of misdiagnosing caries. As it does not contain HEMA, it is less prone to water sorption.

## PRODUCT CHARACTERISTICS :

- Fourth-generation bonding agent;
- Dual cure;
- Absence of HEMA;
- Radiopacity;
- High hydrophobicity;
- Thinner coats;
- Compatible with chemical-, dual- and light-cure materials.

## MAIN COMPETITION IN THE BRAZILIAN MARKET:

Adper Scotchbond Multi-purpose Kit – 3M

## INDICATIONS:

- Direct composite restorations;
- Composite core build-up;
- Desensitization of crown preparations before impressions and interim restorations;
- Indirect metal, porcelain or composite restorations;
- Endodontic post bonding;
- Repair of porcelain restorations;
- Repair of composite restorations; and
- Desensitization of exposed roots.

## EVALUATORS' COMMENTS:

*I have been using ALL-BOND 3 since it was introduced in the Brazilian market. Before that, I used All Bond 2 very often, since 1991. It is, in fact, an absolutely reliable bonding agent that ensures greater restoration durability and no postoperative sensitivity when used in either direct or indirect restorations, if all the stages of the protocol for its use are followed correctly. As its use is different from that of single component bonding systems, dentist that start using ALL-BOND 3 should pay special attention not to get confused by the different bottles and steps. But it is worth following the learning curve, because the benefits are more rewarding than those of conventional single component bonding*

agents. **(José Roberto Moura)**

A versatile bonding system because of its dual-cure characteristic, which can be indicated for both direct resin composite restorations and adhesive cementation of indirect restorations to different materials, including glass-fiber post cementation. **(Rodrigo Ehlers Ilkiu).**

This is a conventional adhesive system used in three steps: 1) acid etching; 2) primer application; and 3) application of fluid hydrophobic resin. For a long time, it has been considered to be the best type of dental adhesive, that is, the gold standard of total-etch systems. Enamel and dentin structures are etched with 32% phosphoric acid. After etching and acid removal with water, the dentin should remain wet for the application of the primer. The primer is in an ethanol solution. The hydrophobic adhesive resin does not contain HEMA, a highly hydrophilic monomer even when polymerized. It is a conventional adhesive system applied in three steps, and dentists should understand and perform each step well for the best results with this material. **(Marcelo Giannini)**

ALL-BOND 3 is a dual-cured adhesive compatible with enamel and dentin when phosphoric acid is previously applied. The absence of HEMA and its hydrophobic characteristics ensure excellent adhesion and bonding durability at the adhesive interface. **(Paulo Vinicius Soares).**

A dual-cure, total-etch adhesive system in three steps, it is compatible with various cementation materials. Because of its application in separate steps, this adhesive system is more sensitive to the technique used by the dentist, who should follow its application steps carefully. It is indicated for most current restorative procedures, such as resin cementation of crowns, veneers, inlays and onlays, as well as for direct restorations. **(Carlos Archangelo).**

Characterized by its hydrophobicity, it is a very interesting system, because it has important characteristics, such as high bonding resistance and absence of HEMA. It also has ethanol, which ensures better solvent evaporation and less postoperative sensitivity. **(Wilmer Fabián Sepúlveda Navarro)**

I consider it an excellent product, derived from ALL-BOND 2, an innovative adhesive in the beginning of the 1990s. By combining the contents of its bottles, it may be used for bonding in direct and indirect procedures, as well as to any substrate! An adhesive that revolutionized the concept of bonding at the time it was launched and that has been considered the gold standard of adhesive systems. ALL-BOND 3 is a three-step system, based on the same concepts used for ALL-BOND 2, but a little simpler. I have achieved excellent clinical and long-term results using these adhesive systems according to clinical follow-ups of over 25 years. But I believe that its use is seen as complex because of the steps and specific mixtures for each clinical step. Younger dentists tend to use simpler systems that have a lower cost. **(José Arbex Filho).**

This material is considered one of the best in its category; however, it requires more clinical steps than others, and its cost in Brazil is high. **(Fabiano Marson).**

ALL-BOND 3, a conventional three-step dual-cure adhesive system, does not contain 2-hydroxyethyl-methacrylate (HEMA), and is indicated for all cases. However, its application is complex and time-consuming, as all other three-step systems. It is the least known and studied product of all competitors in the same conventional three-step category. The HEMA monomer is important in simplified adhesive systems, but it is essential for the infiltration of the hydrophobic monomers of adhesive resins, even in adhesives applied in several steps. Without it, there is often phase separation, which weakens the adhesive interface. In general, the comparison of the cost/benefit ratio of ALL-BOND 3 with other simpler adhesive systems, even the one-step self-cure universal systems, reveals that this adhesive

system has lost a great market share because of its high cost, few differential advantages and little clinical improvement. **(Victor Feitosa)**

If you are a fan of wet bonding or etch-and-rinse techniques, this is an excellent product to have in the office. A separate hydrophobic adhesive produces a hybrid layer that is more permeable to water and thus exposed to its degrading effects. This product is scientifically backed-up by studies published in high-impact journals, developed by a renowned company. I recommend it! **(Rafael Andreiuolo)**

ALL-BOND 3, a conventional adhesive system applied in three steps, has several advantages, such as its use with chemical-, light- or dual-cure materials without any incompatibilities. The only disadvantage of these systems is the number of operative steps. **(Thiago Ottoboni)**

Several studies confirmed the efficacy of ALL-BOND 3 as an adhesive system and qualified it as an excellent option for those that endeavor to achieve high quality results in their daily clinical routine. **(Roberto S. Zangirolami)**

Bisco's ALL-BOND 3 offers a solution that is different from those to which dentists are used, because it is a dual-cure system that requires mixing the contents of bottles A and B at the time of use, applying it to the tooth and, as an optional recommendation, using a low-viscosity, hydrophobic resin, also part of the kit, over the adhesive layer after curing. The application of this resin promises to improve bonding stability and to reduce water sorption, thus increasing bonding durability. This system is quite interesting, but requires technical attention, well described in its package insert! **(Bruno Reis)**

#### CLINICAL TIP:

ALL-BOND 3 is part of a restricted and select group of adhesive systems provided in separate bottles. Its storage time, its possible application in various clinical situations and its excellent bonding efficiency ensure good stability in the long term, a result of the hydrophobic characteristic of the product used on the top layer. **(Luis Felipe Schneider)**

## VOCO'S DIE SILICONE VOCO



Final grade: 9



#### PRODUCT DESCRIPTION :

It is a vinyl polysiloxane material for the extraoral fabrication of working casts of the dental arches. The die silicone models may be used to prepare

indirect composite restorations in the office, without sending models to a laboratory. Setting time is four minutes. After setting, the prosthesis made with the restorative material is carved and then cemented to the tooth structure.

#### **PRODUCT CHARACTERISTICS:**

- Fast and easy fabrication of models and composite inlays in the office.
- All value added in the office, without any laboratory participation.
- Extraordinarily high quality and perfectly harmonious components;
- Simple and efficient method;
- Comfortable procedure, even when fabricating restorations with several surfaces;
- Fabrication of inlays for neighboring teeth;
- Proximal contact preparation does not require the use of complex and expensive techniques using matrices.
- Perfect occlusal anatomy, extraoral carving;
- Fabrication of esthetic, durable restorations without any stress, not even in the case of little cooperative patients.

#### **MAIN COMPETITION IN THE BRAZILIAN MARKET:**

**Scan Die — Yllor**

**Mach II – Die Silicone / Parkell (imported by Wilcos)**

**Blu-Mousse / Parkell (imported by Wilcos)**

#### **INDICATIONS:**

- Extraoral fabrication of dental arch and tooth casts, and cavity preparation.

#### **EVALUATORS' COMMENTS:**

VOCO's die silicone is a polyvinyl siloxane available in the market for the extraoral fabrication of dental arch models. As its setting time is four minutes, indirect composite restorations may be fabricated in the office, at an excellent cost/benefit ratio. Additionally, it is bright red, which contrasts against the color of the resin and facilitates the evaluation of marginal adaptation. This material should be used for cast pouring with alginate, a good quality irreversible hydrocolloid, or polyester. During cast fabrication, the application tip should be placed in the bottom of the mold, pulling it

away as the material is extruded from the syringe to avoid bubbles. **(Renata Pascotto).**

*Excellent material for fast fabrication of casts and small indirect restorations, such as inlays and onlays. (Cristian Higashi).*

*Its performance is excellent for its specific purpose. I would only call special attention to the insertion of the material into the mold, to avoid incompletely covered areas. (Cesar dos Reis Perez)*

*Very practical material for the resolution of extensive restorations, such as inlays or onlays, which can be fabricated extraorally with a good emergence profile and contact surface, good adaptation, anatomy and profitability. (Antonio Sakamoto Junior)*

*Vinyl polysiloxane (addition silicone) has good flowability and resistance for rapid and practical fabrication of casts. Indicated for semi-direct or indirect composite restorations, among others. (Rodrigo Ilkiu)*

*My clinical routine includes semi-direct restorations, such as inlays and onlays. My first choice is always composite materials, and the fabrication of casts with this material optimizes the use of my time greatly, while quality and accuracy remain incredibly high. (Thiago Ottoboni)*

*One of the few materials available in the dental market for this purpose. Easy to handle, it is even indicated for the fabrication of interim restorations. It is a little too expensive and the outcome depends on the dentist's skill in fabricating the composite restoration. (Marcelo Giannini)*

Excellent vinyl polysiloxane material to fabricate models for partial restorations. Dentists may use this material to fabricate composite inlays and onlays using the semi-direct technique. It streamlines office work and reduces time for the procedure to a minimum.

**(Carlos Archangelo)**

VOCO's die silicone is an easy-to-handle material with a short working time. It is an excellent product that streamlines processes for the fabrication of indirect composite restorations in the office. **(André Mallmann)**

I think VOCO's die silicone is an extremely versatile material. It simplifies the fabrication of semi-direct restorations in a dentist's daily routine. More practical than intraoral work, its accuracy is excellent. A great advantage of this type of procedure is the fact that light curing of the composite restoration may have much better results in this case than when working intraorally, which highly improves composite resistance and durability greatly. I use it and recommend it to my students. **(Marcelo Magalhães)**

The use of VOCO's die silicone is an excellent and practical clinical option for the fabrication of semi-direct restorations in everyday clinical practice. Its easy handling, adequate viscosity and short setting time facilitate clinical routine greatly when fabricating this type of restorations, so common in dental offices. I would classify it as an essential material for all dentists, general dentists and specialists, because its benefits and its practical use are very evident. **(Roberto do Amaral)**

VOCO's die silicone is terrific! This material makes it possible to fabricate indirect composite restorations in

the office rapidly and accurately. Depending on the patient's profile and clinical condition, it may be an excellent alternative! At first, the color of the material may be unexpected, but it is essential for the contrast against the resin to be carved on the silicone die. This is a great advantage! **(Raquel Sano Suga Terada)**

An excellent option to fabricate restorations for teeth with large structural losses. Using the direct-indirect technique, we may fabricate inlays, onlays or a full crown rapidly and at a low cost. **(Roberto Zangirolami)**

#### **CLINICAL TIP:**

I have been using VOCO's die silicone for about five years with very satisfactory results. This material, a modified type of polyvinyl siloxane, may be used to take a previous impression of the dental arches of the patient using a high quality irreversible hydrocolloid. It is also good for the fabrication of composite structures, such as more complex class II restorations, inlays, onlays, overlays and even veneers and minimum thickness veneers. After the fabrication of the silicone die, we have a copy of the patient's oral cavity in our hands, with some flexibility, without the need to use isolation or any other material for the posterior release of the composite restoration. One of its great advantages, in addition to accuracy, is the short curing time, which is four minutes. Therefore, all the types of restorations mentioned above may be fabricated during a single visit, if the dentist wishes to, and the cementation may be performed using a resin cement or another cementation technique to be selected. It is certainly a material that I use and recommend. **(Hamilton Renato)**

# VARIOLINK N (Ivoclar Vivadent)



Final grade: 9,7



## PRODUCT DESCRIPTION:

Variolink N is a dual- and light-cure composite cement for glass-ceramic, lithium disilicate glass-ceramic and composite resin restorations. This esthetic cement is characterized by high radiopacity and harmonious optical properties.

## CARACTERÍSTICAS DO PRODUTO:

The base should be used with the low viscosity catalyst to cement crowns and partial crowns, and with the high viscosity catalyst to cement inlays, onlays and veneers. However, dentists are free to choose the viscosity that they think is more adequate for each indication.

## Composition:

- The monomer matrix of Variolink N contains Bis\_GMA, urethane dimethacrylate and triethylene glycol dimethacrylate. The inorganic fillers are barium glass, ytterbium trifluoride, barium-aluminum fluorosilicate glass and spheroid mixed oxide. Initiators, stabilizers and pigments are additional components.
- Particle size ranges from 0.04  $\mu\text{m}$  to 3.0  $\mu\text{m}$ .
- Mean particle size is 0.7  $\mu\text{m}$ .
- Total amount of inorganic particles is: base — 46.7% by volume; low viscosity catalyst — 43.6% by volume; and high viscosity catalyst — 52% by volume.

## Shades:

BASE	Vita Lumin shade guide (A–D)
Bleach XL	BL1
Transparent T	T
White	A1
Yellow (universal)	A3
CATALYST (high and low viscosity)	
Transparent	T
Yellow (universal)	A3

## INDICATIONS:

Variolink N is indicated for the cementation of indirect leucite-reinforced glass-ceramic restorations using ingots (IPS Empress Esthetic, IPS Empress CAD), lithium disilicate glass ceramic (IPS e.max CAD, IPS e.max Press) and composites (SR Nexco and SR Adoro), for example.

- Veneers
- Inlays, onlays
- Crowns

**MAIN COMPETITION IN THE BRAZILIAN MARKET:****Dual-cure cements:**

- **RelyX ARC (3M)**
- **NX3 Dual Cure (Kerr)**
- **All Cem Dual (FGM)**
- **PermaCem (DMG)**
- **Calibra Ceram (Dentsply)**

**Light-cure cements:**

- **RelyX Veneer (3M)**
- **All Cem Veneer (FGM)**

**EVALUATORS' COMMENTS:**

Since the time when Variolink II was introduced, this cement has been the most often used by our team for adhesive cementation. Reliability and versatility for various clinical cases. **(Ronaldo Hirata).**

Variolink N is a versatile, practical and functional cement. It is the first cement dentists should have, because it can be used for all types of cementation, dual- or light-curing, in all clinical cases of adhesive cementation of indirect ceramic or composite restorations. **(Rodrigo Ehlers Ilkiu)**

Very versatile system. It is presented as a dual-cure cement, but may also be used only as a light-cure option; it is available in two levels of viscosity, four shades and their corresponding try-in pastes. **(Cristian Higashi).**

Excellent composite cement. I like its esthetic results and versatility, as it may be used to cement ceramic laminate veneers, glass fiber posts, inlays, onlays and full metal-free crowns. Working time is excellent. **(Antônio Setsuo Sakamoto Júnior)**

Excellent composite resin, especially because of its fluorescence and the options of shades and try-in pastes. **(Thiago Ottoboni)**

Variolink N is a composite cement that may be used as a dual- or light-cure cement. Because of its various shades and the possibility of dual- or light-curing, it has numerous indications for glass-ceramic restorations, such as all-ceramic crowns, inlays, onlays and laminate veneers. Its use facilitates the daily routine of dentists because a single cementation kit may be used for several procedures. **(Carlos Archangelo).**

A classical success of the Ivoclar-Vivadent cement line. For those that desire to perform all cementation procedures using only a limited armamentarium, Variolink N is the answer. **(Ginger Mello).**

The characteristics that make Variolink N different from other cements available in the market are its high bonding values, ease of use, practicality and shade options. In addition, as it is also a dual-cure cement, it may also be used in all clinical cases, from those that require chemical- and light-curing of thicker restorations, to those cases of ultrathin restorations that require a light-cure cement and the use of the base paste alone. Because of these characteristics, it is a very practical cement and an essential resource for any dentist. **(Roberto César do Amaral)**

Variolink N is a complete cement for restorative dentistry. Its versatile use as a dual- or light-cure cement is its greatest differential advantage. Easy to handle, it has excellent radiopacity and a wide spectrum of shades. **(Victor Hugo Nastri)**

In daily clinical routine, all dentists that work with esthetic dentistry need a multi-purpose adhesive cementation system. Variolink N has an important characteristic: it is a composite cement that may be used when either dual- or light curing. This way, it may be used for both thick ceramic restorations and laminate veneers, such as minimal thickness veneers. Its association with the Excite DSC adhesive, a dual-cure material, makes conversion more effective in absence of light, such as in restorations with more opaque ceramics and limited light transmission. **(Oswaldo Scopin de Andrade).**

**CLINICAL TIP:**

*This dual-cure composite cement system has try-in pastes for the selection and correction of the final shade of thin metal-free restorations.*

**(Antônio Setsuo Sakamoto Junior)**