

Clinical Report

EsFlow[®] PLUS ABSOLUTELY VERSATILE
Injectable

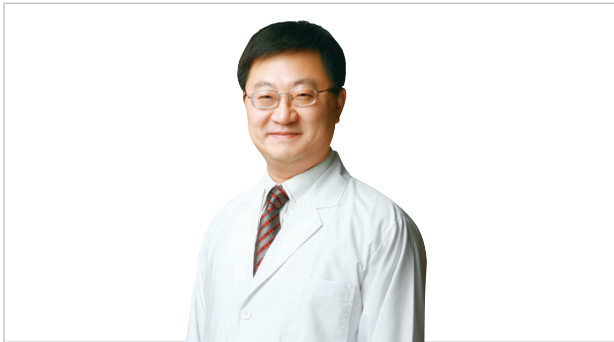
Light-Cured Flowable Composite Resin



Stack as you like,
Flow as you need.



www.spident.co.kr



Hwang Sung-wook

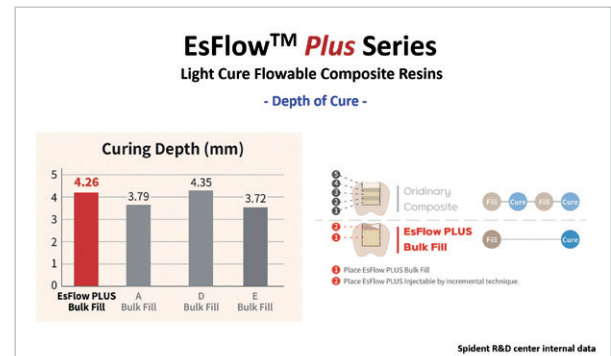
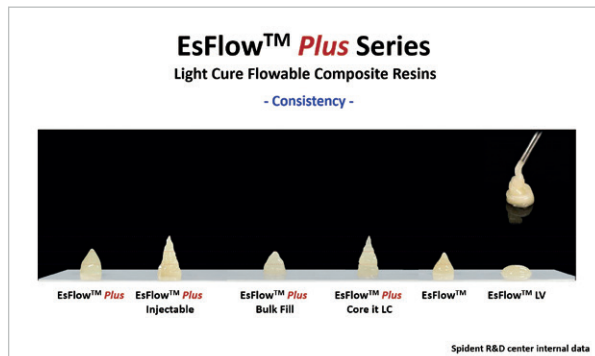
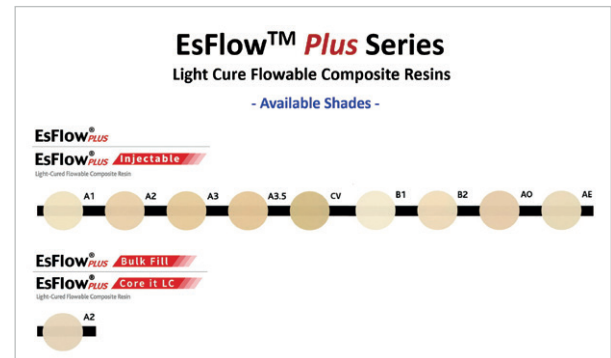
Doctor of Dental Medicine
Cheongsan Dental Clinic



- Flowable resins; 2.5g syringe 2EA
 - EsFlow® PLUS, EsFlow® PLUS Injectable, EsFlow® PLUS Bulk Fill & EsFlow® PLUS Core it LC
- Standard metal tip: 4EA
- Elephant nose tip: 4EA
- Product manual and Technical Guide



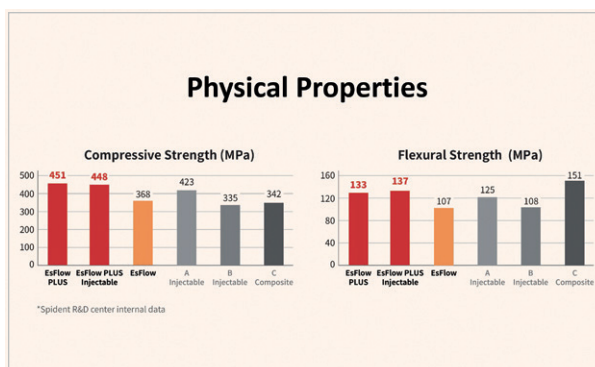
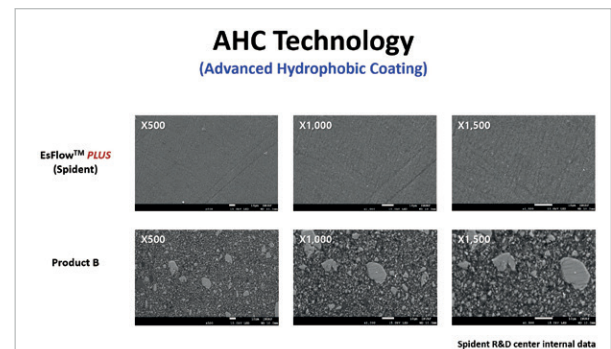
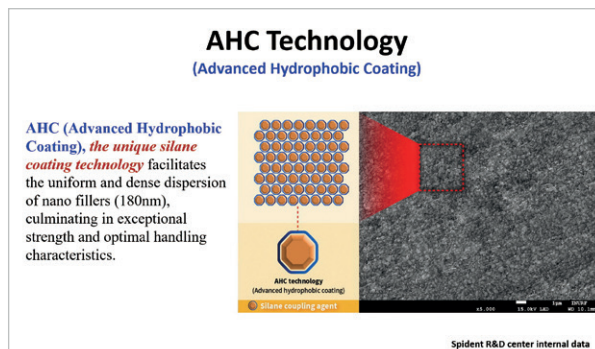
- Available in four optimized formulations to meet diverse clinical needs, **offering a broad selection of shades and viscosities for enhanced procedural flexibility. (Figure 1)**
 - 4 consistencies:
 - EsFlow® PLUS, EsFlow® PLUS Injectable, EsFlow® PLUS Bulk Fill, EsFlow® PLUS Core it LC
 - EsFlow® PLUS & EsFlow® PLUS Injectable: 9 shades (A1, A2, A3, A3.5, CV, B1, B2, AO, AE)
 - EsFlow® PLUS Bulk Fill & EsFlow® PLUS Core it LC: 1 shade (A2)
 - By applying a proprietary technology known as AHC (Advanced Hydrophobic Coating), a high volume of inorganic filler particles is uniformly distributed within the resin matrix, significantly enhancing the physical properties of the composite resin (Figure 2)
 - Newly designed metal tips have improved internal structure to prevent the formation of voids or bubbles and solve the oozing issue after use. **The “elephant nose tip,” made of soft metal, can be easily bent with fingers into a rounded U-shape without kinking, allowing for smooth and consistent material flow during extrusion. It enables easier access to hard-to-reach areas. (Figure 3)**
 - Exhibits natural fluorescence under UV light, enhancing the esthetics of the final restoration. (Figure 4)
 - Maintains surface gloss for an extended period after final polishing.
 - Shows thixotropic characteristics, making it easy to apply into cavities. Flowability increases when stirred with a thin instrument, allowing for easy adaptation in narrow spaces.
 - As a Korean product, it offers excellent cost-effectiveness.
- 👁 Indications (Figure 5):
- Small Class I, II, III & IV cavities • Class V & VI cavities • Base & sealing
 - Repairs • Core build-up



01

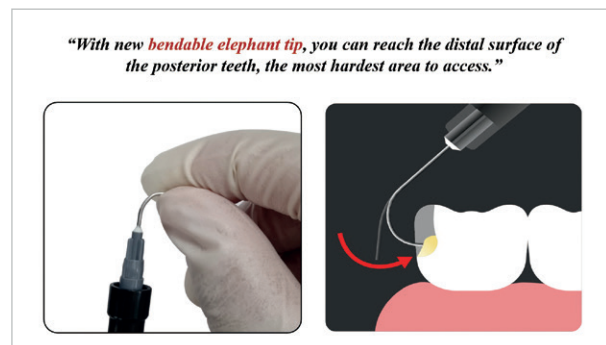
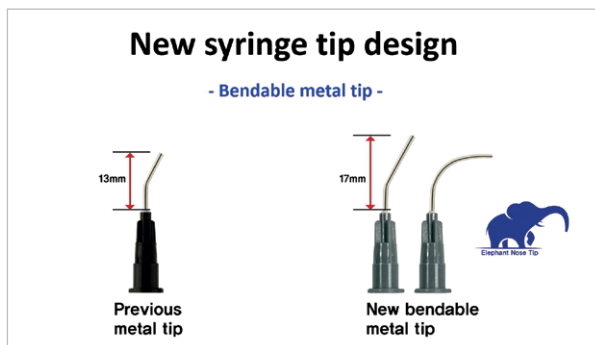
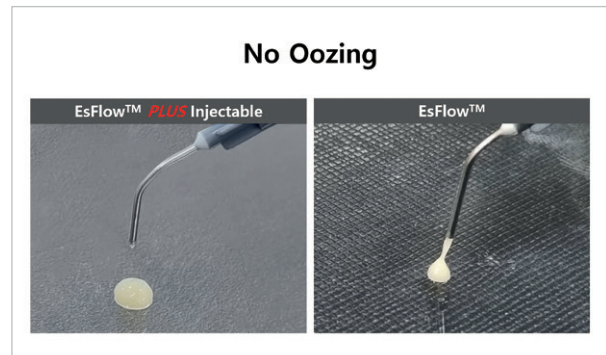
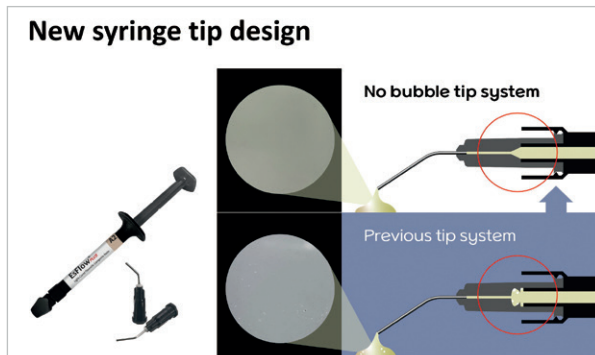
Product line-up of EsFlow® Plus(Spident Co.)

EsFlow PLUS® Series (Spident Co.) is available in four different viscosities, each designed to suit specific clinical applications. EsFlow PLUS® and EsFlow PLUS® Injectable are offered in nine shades, while EsFlow PLUS® Bulk Fill and EsFlow PLUS® Core it LC are available in a single A2 shade.



02

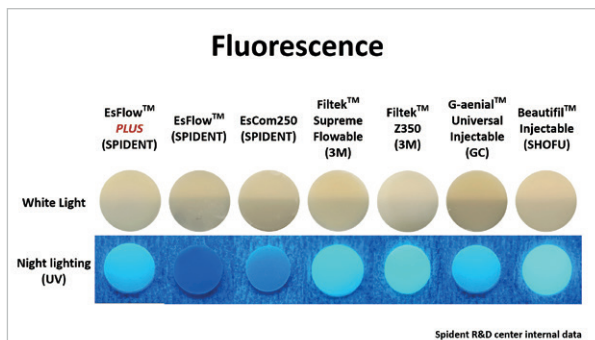
The proprietary inorganic filler coating technology known as AHC (Advanced Hydrophobic Coating) enables a high volume of inorganic filler particles to be uniformly packed into a given volume of the resin matrix, helping to improve the physical properties of the composite resin.



03

Bubble-free design of new syringe tip

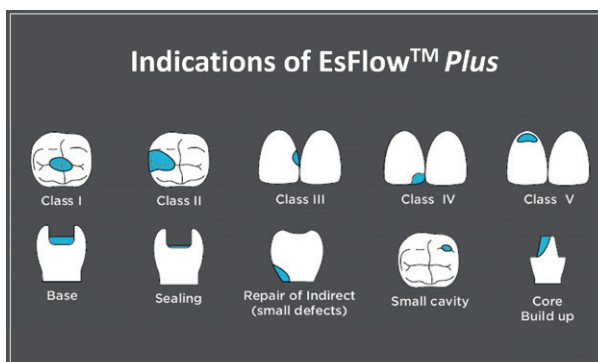
The internal structure of the syringe tip has been redesigned to prevent bubble formation within the extruded flowable resin and to eliminate post-extrusion oozing. The tip is available in two metal types. For procedures requiring bending, the elephant nose tip—made from soft metal—is recommended. It can be smoothly curved into a rounded U-shape without kinking, ensuring a consistent and controlled flow of material during extrusion, thereby enhancing ease of use and precision.



04

Fluorescence for natural esthetics

Compared to competing products, it exhibits one of the highest levels of fluorescence, allowing the final restoration to display natural esthetics within the oral environment.



05

Clinical indications of EsFlow® Plus Series

The EsFlow PLUS® Series by Spident Co. is a flowable resin designed to suit a wide range of clinical applications. With its improved physical properties and excellent handling characteristics, it can be applied to various clinical cases and, when necessary, used in combination with restorative composites to maximize treatment outcomes.

DESCRIPTION

The EsFlow PLUS® Series (Spident Co.), is an upgraded version of the original EsFlow (Spident Co.), has been enhanced to resolve certain limitations of the previous product and features redesigned syringes and tips.

The most notable change is the diversification of the product line-up into four sub-classes, offering broader clinical applicability compared to the original version. Clinicians are able to choose the most appropriate EsFlow PLUS® Series (Spident Co.) option based on their specific clinical needs. By applying AHC (Advanced Hydrophobic Coating) technology—a proprietary nano-filler surface coating method—180 nm inorganic filler particles are uniformly packed at an optimized ratio, resulting in excellent physical properties and handling performance. Compared to the original EsFlow (Spident Co.), the significantly improved properties allow for confident use even in posterior restorations. In particular, EsFlow PLUS® Injectable (Spident Co.) offers excellent handling, a wide range of shades, and outstanding mechanical performance, making it adaptable for various clinical applications. **In most indications, it demonstrates the potential to effectively replace conventional restorative composite materials. (Figure 2)**

The metal tips provided with the product syringe feature an improved internal design that prevents the formation of voids or bubbles during material extrusion. They also minimize resistance to flow, preventing post-extrusion oozing of the material. The metal tips provided with the product syringe feature an improved internal design that prevents the formation of voids or bubbles during material extrusion. They also minimize resistance to flow, preventing post-extrusion oozing of the material. Two tip designs (No oozing) are available. Conventional metal tips tend to bend into a V-shape, which can interfere with the flow during extrusion. In contrast, the newly designed metal tip is made of soft metal, making it easy to bend by hand into a U-shape (elephant nose tip) that ensures smooth and consistent material flow. This characteristic makes procedures significantly easier, especially when filling cavities in hard-to-reach areas. (Figure 3)

EsFlow PLUS® (Spident Co.) and EsFlow PLUS® Injectable (Spident Co.) are available in nine shades, providing excellent shade-matching options for highly esthetic restorations. EsFlow PLUS® Bulk Fill (Spident Co.) combines a translucent shade with an optimized depth of cure, enabling efficient restoration of deep cavities in a single increment. EsFlow PLUS® Core it LC (Spident Co.) delivers suitable flow and sufficient depth of cure, enabling quick and convenient core build-up procedures. With a wide range of viscosities and shades optimized for specific clinical techniques, the product line can be effectively applied across various indications. (Figure 1)

RECOMMENDATION

Products in the EsFlow PLUS® Series (Spident Co.) are light-cure composite resins, making adhesive bonding an essential step in the procedure. For enamel surfaces, selective etching with 35% phosphoric acid gel is recommended. For dentin surfaces—especially in deep cavities where postoperative sensitivity may occur—acid etching should be avoided when possible.

The use of a modern universal adhesive is strongly recommended. For optimal performance, EsFlow PLUS® Series (Spident Co.) products are best used in combination with the company's own K-Bond Universal (Spident Co.)

EsFlow PLUS® Series (Spident Co.) products are available in four sub-classes, each offering different consistencies, translucencies, and shades—allowing for effective application across a wide range of clinical cases.

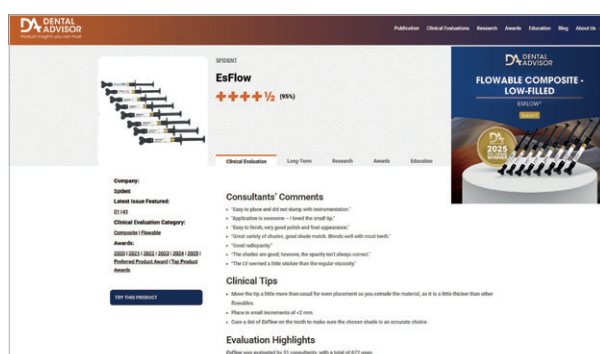
- EsFlow PLUS® (Spident Co.) – Offered in nine shades and features flow characteristics similar to standard flowable resins, making it versatile for everyday use.
- EsFlow PLUS® Injectable (Spident Co.) – Also available in nine shades, with higher viscosity that allows for easy contouring and shape maintenance.
- EsFlow PLUS® Bulk Fill (Spident Co.) – Provided in a single, more translucent shade, ideal for quickly filling deep and large cavities. Recommended for use as a base in deep cavities.
- EsFlow PLUS® Core it LC (Spident Co.) – As the name suggests, it is recommended for filling access cavities after endodontic treatment or replacing existing restorations with extensive secondary caries. With the highest viscosity in the line-up, it is particularly useful for core build-up procedures.

Flowable resins are typically best delivered into the cavity using fine, elongated instruments such as a #6 explorer. The EsFlow PLUS® Series (Spident Co.) demonstrates excellent thixotropic behavior—its viscosity changes in response to applied pressure. Utilizing instruments that leverage this property can significantly enhance precision and efficiency in restorative procedures.

CONCLUSION

With ongoing advancements in physical properties and handling characteristics of flowable resins, their role in everyday clinical practice continues to grow. However, unexpected supply disruptions can pose serious challenges, highlighting the importance of having reliable alternatives on hand. The quality of Korean-made dental materials has significantly improved in recent years, with the growing prominence of K-dental products receiving well-deserved recognition.

The original EsFlow® (Spident Co.), predecessor to EsFlow PLUS® (Spident Co.), was notably well-reviewed by the highly respected dental materials evaluation organization, The Dental Advisor (Figure 6). For clinicians who primarily rely on flowable resins from premium global brands, high-quality Korean products are strongly recommended as practical and reliable alternatives.



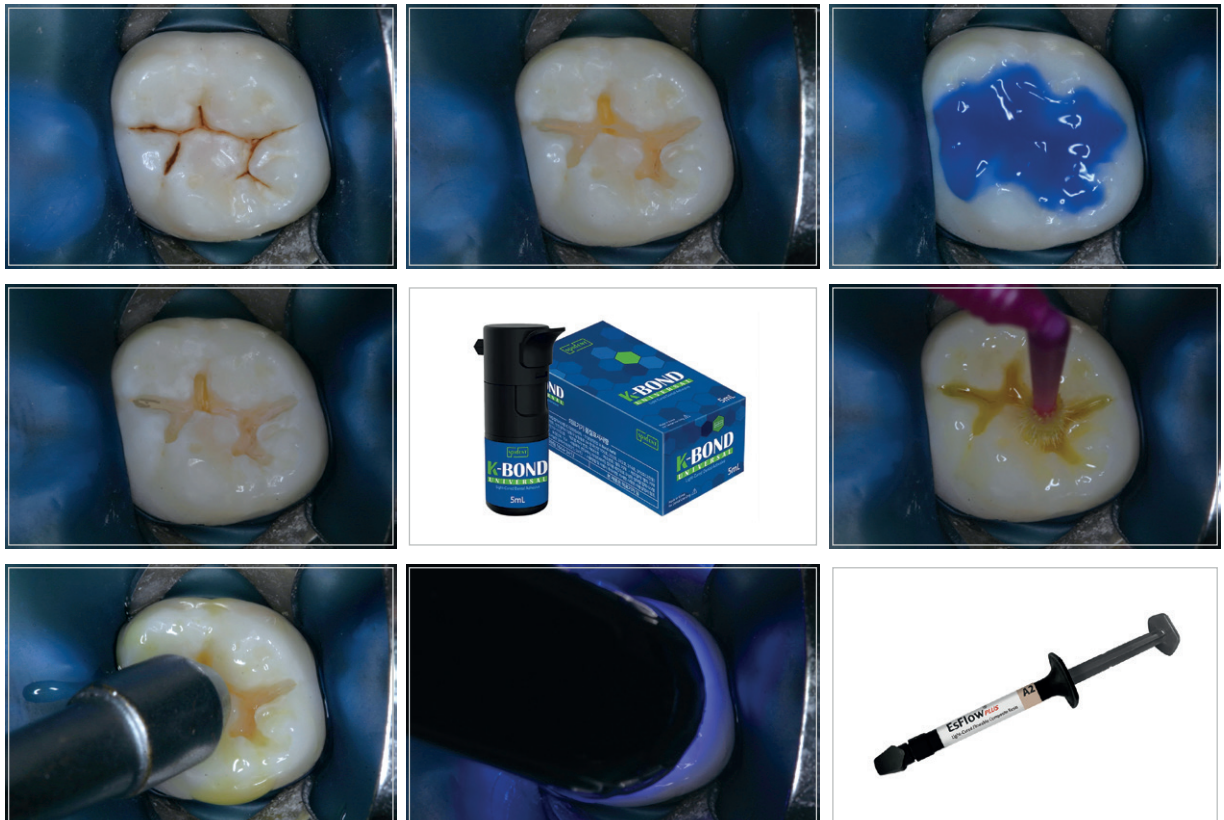
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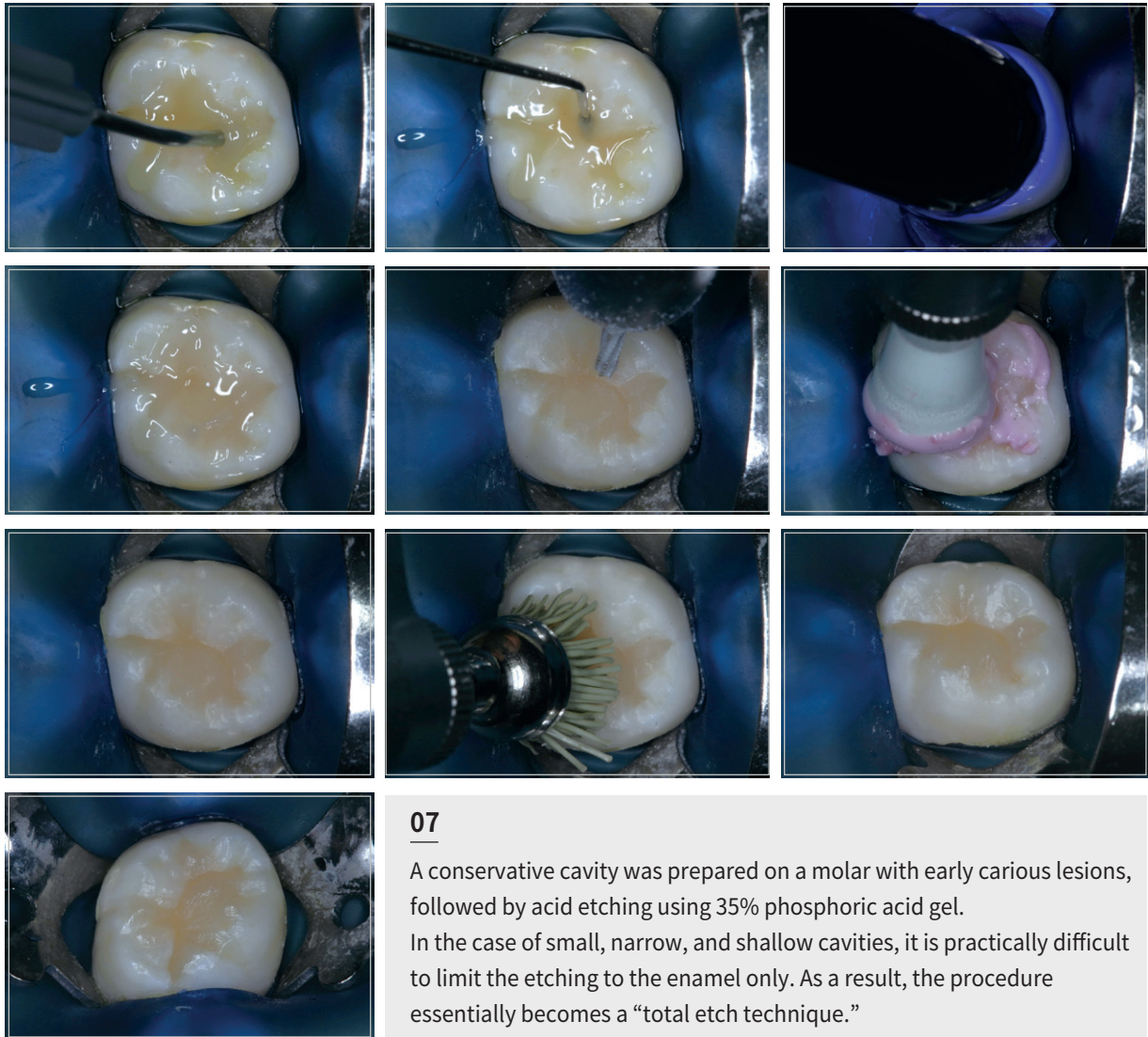
Evaluation featured in Dental Advisor®

Before its enhancement, EsFlow® (Spident Co.) and EsFlow® LV (Spident Co.)—the predecessors of EsFlow PLUS®—received strong evaluations from Dental Advisor®, one of the most respected clinical dental materials review organizations in the United States. These reviews offer valuable guidance for Korean clinicians when selecting materials for clinical application.

Clinical Tips

- It is strongly recommended to use the product in combination with a bonding procedure. For enamel surfaces, selective acid etching with 35% phosphoric acid gel is advised.
- The use of a universal adhesive with self-etching capability on dentin is recommended.
- To minimize the risk of post-operative hypersensitivity, acid etching on dentin should be avoided in deep cavities. Instead, it is recommended to restore the cavity using 2 to 3 incremental layers.
- In narrow and deep cavities, it is advisable to use materials with good flowability. For wide and large cavities, materials with higher viscosity and controllable flow are recommended.
- When using a flowable resin, a #6 explorer is convenient for placement.
- When using a flowable resin, avoid bending the syringe tip into a sharp V-shape, as this can increase resistance during extrusion. The added resistance may require excessive pressure, which can result in post-extrusion oozing or even cause the syringe tip to detach during use. Use with caution to ensure safe and controlled delivery.
- When used in deep cavities—such as for core build-up—void prevention is essential to ensure clinical success. The material should be applied in controlled increments with appropriate thickness to allow for sufficient light penetration and complete polymerization. A high-performance curing unit with an output of at least 1000 mW/cm² is recommended for optimal results.





07

A conservative cavity was prepared on a molar with early carious lesions, followed by acid etching using 35% phosphoric acid gel. In the case of small, narrow, and shallow cavities, it is practically difficult to limit the etching to the enamel only. As a result, the procedure essentially becomes a “total etch technique.”

After acid etching for approximately 15 to 20 seconds, the cavity is thoroughly rinsed with water and gently dried using compressed air. **Bonding is then performed using the latest universal adhesive, K-Bond Universal** (Spident Co.), followed by light curing for 10 seconds with a high-performance curing unit. **The bonded cavity is then restored using EsFlow PLUS® Injectable** (Spident Co.), and it is recommended to fill it in two separate steps for better adaptation and curing. In narrow and deep cavities, it is important to prevent void formation. Instruments such as a #6 explorer can be effectively used to leverage the material’s thixotropic properties.

When working with composite resin, slightly overfilling the cavity is preferable. Underfilling—where the material does not fully reach the cavity margins—can lead to clinical complications. A slight overfill allows the final contour to be accurately refined during occlusal adjustment and finishing.

Finishing and polishing should then be performed with caution to prevent overheating or applying excessive stress to the adhesive interface. A properly completed restoration will exhibit a clean, glossy marginal finish, free of white lines.

The enamel bonding performance of K-Bond Universal, combined with the low polymerization shrinkage and excellent polishability of EsFlow PLUS® Injectable (Spident Co.), demonstrates quality equivalent to that of leading global brands.