

# Evolve.

## GIOMER TECHNOLOGY

taking dentistry to the next level  
**BIOACTIVE DENTAL MATERIALS**

### Beautiful Flow Plus X

High-Gloss Injectable Hybrid Restorative for All Indications



### Beautiful II PINK

Gingival Fluoride Releasing Nano-Hybrid Composite



### Beautiful II

A Nano-Hybrid Composite with Fluoride Release & Recharge



### Beautiful II LS

A Micro-Hybrid Fluoride Releasing, Bioactive Composite



# GIOMER TECHNOLOGY

taking dentistry to the next level

## The Evolution of Giomer Technology.

As with all great technology, resin based composites continue to evolve and with this bioactive benefits have become increasingly important.

The Beautifil resin composite lines contain Shofu's proprietary Giomer technology, a bioactive surface pre-reacted glass (S-PRG) filler that actively releases six beneficial ions including fluoride.

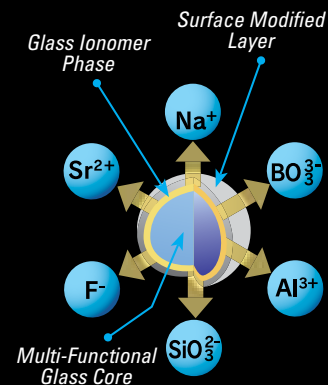
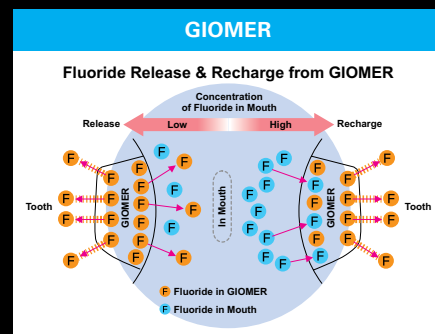
Giomers unique ability to not only release but recharge fluoride helps to provide continual protection to the tooth.

Giomer benefits:

- Decrease in acid production of cariogenic bacteria
- Formation of an acid-resistant layer
- An anti-plaque effect
- Reduction in tooth mineral solubility

The quality of any new technology must be measured by its performance. In a major university clinical study, patients at the 8-year recall with Beautifil restorations displayed no secondary caries, failures, post-op sensitivity and maintained aesthetics.<sup>1</sup> At 13 years these same restorations had a retention rate of 61% and a secondary caries rate of only 3%.<sup>2</sup>

Giomer technology is an effective solution to overcome the challenges within dentistry.

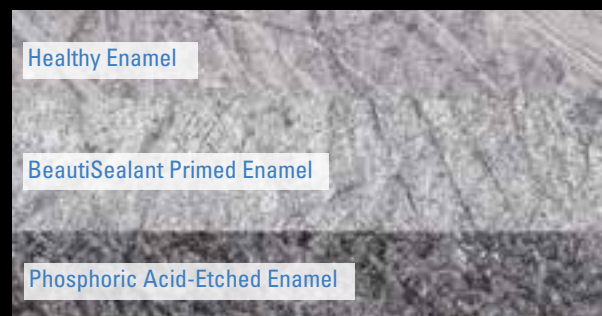


*Giomer's continuous fluoride release and recharge capability contributes to long-term caries inhibition*



## BEAUTISEALANT

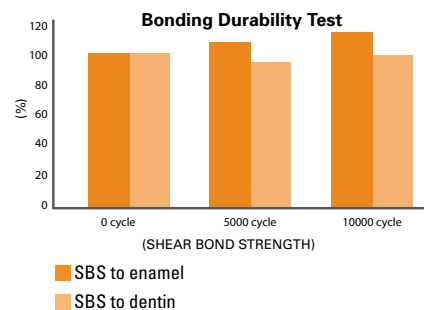
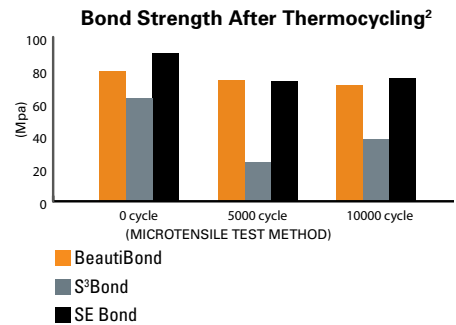
BeautiSealant is BPA- and HEMA-free with dual adhesive monomers that thoroughly penetrate and prepare pits and fissures for bonding to the sealant. Unlike traditional sealants which require phosphoric acid etching, demineralizing and dehydrating healthy teeth, Shofu's self-etching primer is significantly less acidic helping to preserve healthy tooth structure.



# BeutiBond®

The strength and durability of BeutiBond has been validated through in vitro studies and multi-site clinical studies as well as SEM and TEM observation.<sup>3-5</sup> BeutiBond continues to deliver outstanding results in worldwide clinical trials and recently an independent study found high bond strengths were not significantly improved even with the addition of phosphoric acid etching steps.<sup>7</sup> The phosphonic and carboxylic acid monomers in BeutiBond promote wetting and monomer penetration into the surface of hard tissue.

- High enamel and dentin bond strength was achieved with BeutiBond despite less aggressive etching patterns.<sup>7</sup>
- Comparative 3-year clinical study showed 0% sensitivity and 93.7% retention rate, with half the failure rate of Xeno IV<sup>8</sup>
- No HEMA
- Equally high shear bond strength to both enamel (26.4) and dentin (27.8) – one coat, no agitation, no etch. Just applied and cured – cannot be easier!<sup>7</sup>



	BEAUTIFIL Flow Plus X	BEAUTIFIL Flow Plus	BEAUTIFIL Flow	BEAUTIFIL II	BEAUTIFIL II Enamel	BEAUTIFIL II Gingiva	BEAUTIFIL II LS	BEAUTIFIL-Bulk Flowable	BEAUTIFIL-Bulk Restorative
Minimally invasive restorations	X	X	X	X	X	X	X	X	
Base/liner under restorations	X	X	X					X	
Anterior & posterior restorations	X	X		X	X	X*	X		X**
All classes of restorations, I-V	X	X		X	X		X		
Direct laminate veneer	X	X		X	X				
Core buildup	X	X			X				
Repair of restorations	X	X			X		X		

\*Class V restorations

\*\*Posterior restorations only

## References

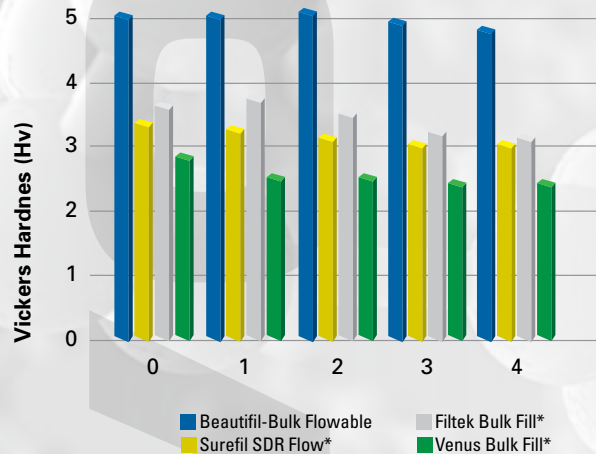
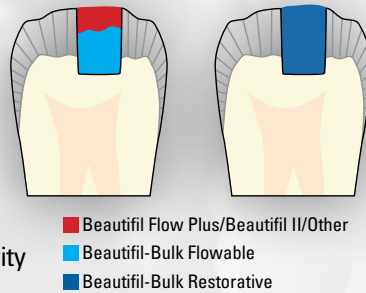
1. Gordan VV, Mondragon E, Watson RE, Garvan C, Mjör IA. A clinical evaluation of a self-etching primer and a giomer restorative material: results at eight years. *J Am Dent Assoc.* 2007;138(5):621–627.
2. Gordan VV, Blaser PK, Watson RE, et al. A clinical evaluation of a giomer restorative system containing surface prereacted glass ionomer filler: results from a 13-year recall examination. *J Am Dent Assoc.* 2014;145(10):1036–1043.
3. University of Florida study. 3104 Clinical Evaluation of a Giomer Restorative System: Thirteen-Year Recall. V.V. Gordan, DDS, MS; P.K. Blaser; R.E. Watson, DDS, MAE; L. Sensi; D. McEdward, J.L. Riley III; I.A. Mjör, BDS, MSD, MS, Dr.odont. IADR General Session, March 2013
4. Uno S, Morigami M, Sugizaki J, Yamada T. SEM and TEM observation of the bonding interface created with an experimental one-bottle one-step resin bonding agent. *Adhes Dent* 2008;26(1):30-35.
5. Kawamoto O, Nagano F, Yasumoto K, Sano H. Micro-tensile bond strength of one two-step self-etching adhesives using Novel thermocycling method. Poster Presentation, 3rd IAD, 2008 Special Issue:126, Abstr P085.
6. Shinno K, Ichizawa K, Nakatsuka T, et al. Bonding ability of resin-bonding systems containing phosphonic acid adhesive monomer. *J Dent Res* 2008, Abstr#0394.
7. Dr. Camila Sabatini independent study SUNY at Buffalo, School of Dental Medicine Department of Restorative Dentistry, Buffalo, NY, USA. Presented at the International Dental Adhesives Meeting.
8. M.A. LATTA et al., *J Dent Res* 92 (Spec Iss A):176524, 2013 ([www.dentalresearch.org](http://www.dentalresearch.org)). Xeno IV is a registered trademark of Dentsply.

\*All trademarks belong to their manufacturers.

## BEAUTIFIL-Bulk Flowable

Beautiful-Bulk Flowable redefines resin-filling technology by combining the benefits of bulk-fill delivery with bioactive properties attributed to the proprietary surface pre-reacted glass-ionomer (S-PRG) chemistry. The ion exchange from Giomer fillers help neutralize acids that lead to tooth demineralization and decay.

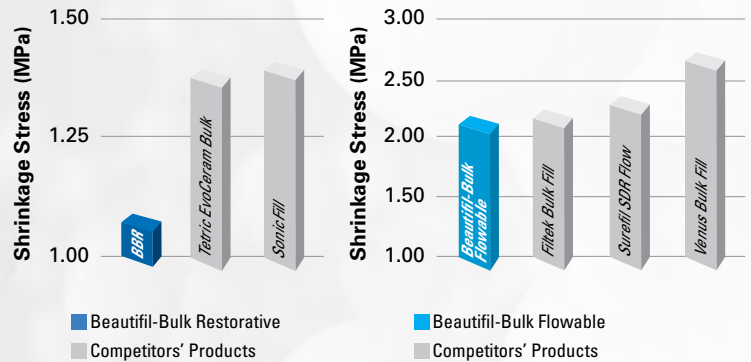
- Base and liner in classes I and II
- Highly filled (72.5 wt%) – no-bubble consistency with better marginal adaptation
- High flexural strength (119 MPa) and low flexural modulus (9 GPa)
- Chameleon effect with life-like aesthetics
- Fluoride release and recharge – maintains bioactivity



## BEAUTIFIL-Bulk Restorative

Beautiful-Bulk Restorative is a conventional packable composite resin indicated for direct posterior restorations including the occlusal surfaces. It has excellent condensability and sculptability as well as shade stability before and after light curing. Fully polymerized at 4mm depth of cure, Beautiful-Bulk Restorative has a high fill ratio at 87.0wt%, and low shrinkage stress.

- Complete polymerization at 4mm depth of cure
- Very low shrinkage (1.7%) and shrinkage stress (1.06 MPa)
- High level of radiopacity (3.0 Al:mm)
- Tooth-like aesthetics with natural fluorescence and chameleon effect
- Sustained fluoride release/recharge with bioactive Giomer chemistry



### BEAUTIFIL-Bulk Restorative Case Study





## BEAUTIFIL Flow Plus<sup>®</sup> X

Beautiful Flow Plus X is the latest bioactive injectable hybrid restorative in the Beautiful product line with a newly developed patented nano S-PRG filler. Beautiful Flow Plus X has all of the Giomer chemistry attributes, including fluoride release and recharge, now with improved handling and effortless polishing that maintains a long-lasting shine.

- Achieves more surface gloss in less time—effortless polishing
- Improved handling
- Stackable & sculptable; stays put
- Chameleon effect—aesthetically blends with the natural tooth
- High flexural strength
- Low wear resistance & shrinkage
- Indicated for anterior & posterior teeth, classes I-V

## BEAUTIFIL Flow Plus<sup>®</sup>

Combining the delivery of flowable with the strength, durability and aesthetics of hybrid composite, Beautiful Flow Plus is the next step in the evolution of restorative materials. This fluoride-releasing injectable composite is densely packed with Giomer nano-fillers (67 wt%) for fracture-free restorations. Two viscosities, a sculptable zero-flow and traditional low-flow, demonstrate high compressive and flexural strength (ca. 350 MPa and 130 MPa, respectively) making the material optimal for restoring both anterior and posterior teeth, even cusps and marginal ridges.

- Base, liner and final restorative – all in one
- No drip or ooze syringe eliminates product waste
- Extremely low wear rate yields excellent long-term results
- High radiopacity (3.4 Al:mm) permits viewing and maintenance of treated site

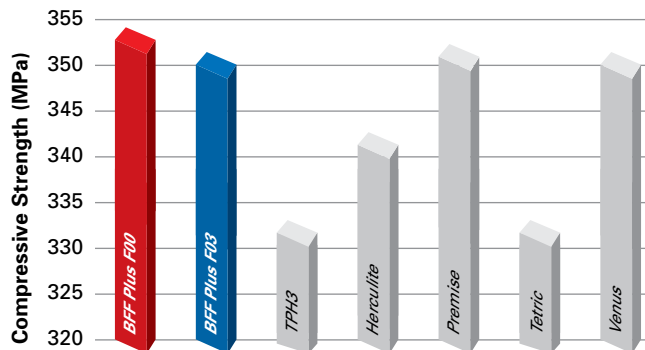
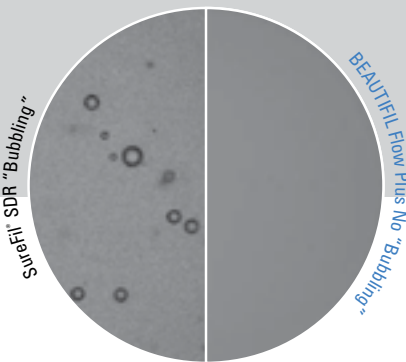


flowable composite

## BEAUTIFIL® Flow

Beautiful Flow is the original fluoride-releasing Giomer composite designed to provide the ease of handling and placement. Two distinct viscosities, F02 and F10, demonstrate the same physical and mechanical characteristics and maintain ideal aesthetics.

### BEAUTIFIL Flow Plus Case Study

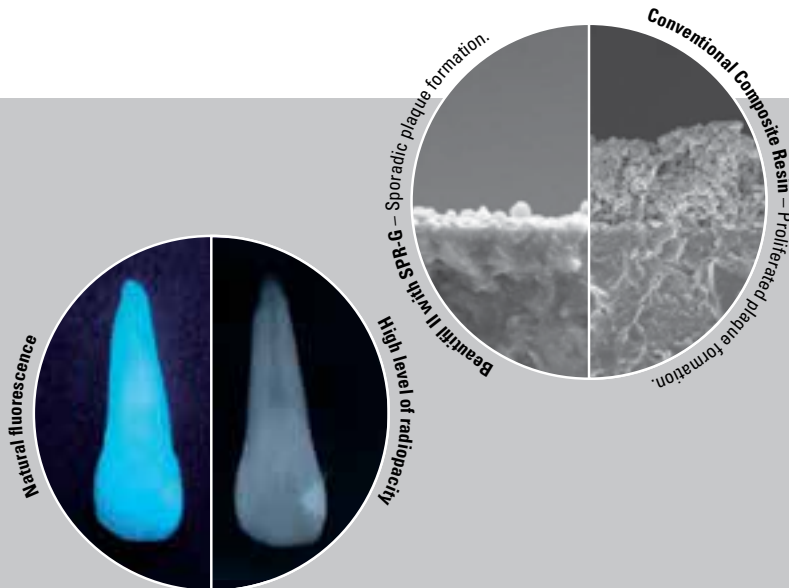


■ Beautiful Flow Plus F00  
■ Beautiful Flow Plus F03  
■ Competitors' Products

## BEAUTIFIL® II

Beautiful II creates indistinguishable restorations with optical characteristics of natural teeth. It has excellent versatility with natural shade reproduction that can be achieved with a chameleon effect, using a single shade that blends well with surrounding teeth making the restoration undetectable. Beautiful II is an aesthetic, universal nano-hybrid composite that releases and recharges fluoride and is approved for classes I-V, perfect for direct restorations that require optimum aesthetics and bioactivity. After 13 years of placement, 61% of 41 restorations observed had either excellent or satisfactory ratings.<sup>1</sup>

- Sustained fluoride release and recharge
- Ideal handling – easy sculpting without slumping or sticking
- Exceptional marginal seal
- Natural fluorescence with high radiopacity (2.3 AI:mm)
- Fast and easy polishing creates outstanding surface luster that retains gloss over time
- Anti-plaque attributes minimize bacterial colonization and plaque build-up



### BEAUTIFIL II Case Study



## BEAUTIFIL® II LS

Indicated for all classes of restorations, I—V and highly filled (83 wt%), Beautifil II LS, demonstrates high compressive and flexural strength (ca. 370 MPa and 120 MPa, respectively), maintains ideal color stability and polishes in an instant, producing a long-lasting sheen. Beautifil II LS has been formulated to minimize polymerization shrinkage and shrinkage stress to prevent micro-leakage and marginal discoloration for a durable aesthetic restoration.

- Great strength and high wear resistance
- Polishes in an instant
- Tooth-like aesthetics with natural fluorescence and chameleon effect
- Natural light transmission and diffusion
- Sustainable fluoride release and recharge with bioactive Giomer Technology
- Low volumetric shrinkage (0.8%) and shrinkage stress (2.72 MPa)

## BEAUTIFIL® II Gingiva & Enamel

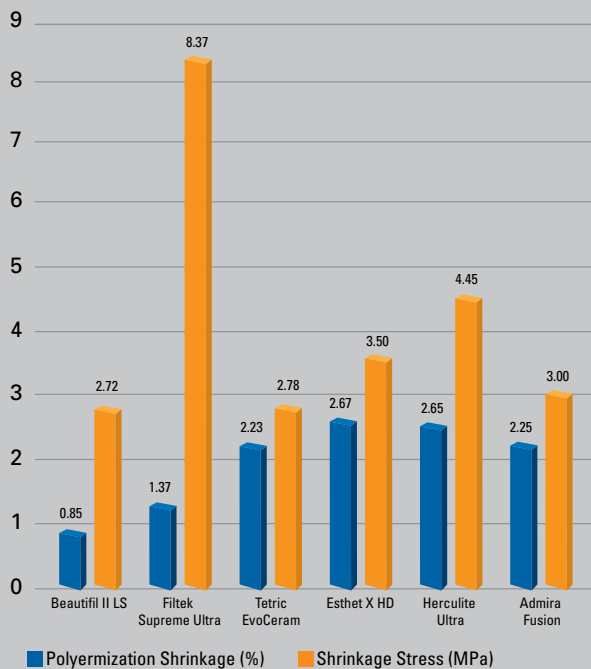
Five gingival shades of Beautifil II Gingiva can be easily blended to custom shade-match any type of gum tissue to meet the needs of all ethnicities. The material can be predictably bonded to dentin, enamel, ceramics and metal substrates.

- Improve the appearance of soft tissue without surgery
- Restore recession, lost papilla and black triangles
- Mask exposed abutments and C&B margins
- Repair worn, fractured dentures

Intended for direct anterior restorations, Beautifil II Enamel, is available in four shades that can be layered and blended together to achieve polychromatic restorations with morphology and aesthetics of natural dentition.

- Create natural results with a simplified layering and sculpting
- Modeled after the porcelain color concept—easy color matching
- Direct veneers made simple

Polymerization Shrinkage (%) and Shrinkage Stress (MPa)



BEAUTIFIL II Gingiva & Enamel Case Study



Classical Vita Shade Selection	INJECTABLE COMPOSITES							PACKABLE COMPOSITES		
	BEAUTIFIL Flow Plus X F00 2.2g Syringe	BEAUTIFIL Flow Plus X F03 2.2g Syringe	BEAUTIFIL Flow Plus F00 2.2g Syringe/ 0.21g x 20 Tips	BEAUTIFIL Flow Plus F03 2.2g Syringe/ 0.21g x 20 Tips	BEAUTIFIL Flow F02 2g Syringe	BEAUTIFIL Flow F10 2g Syringe	BEAUTIFIL Bulk Flowable 2.4g Syringe/ 0.23g x 20 Tips	BEAUTIFIL Bulk Restorative 4.5g Syringe/ 0.25g x 20 Tips	BEAUTIFIL II 4.5g Syringe/ 0.25g x 20 Tips	BEAUTIFIL II LS 4g Syringe/ 0.25g x 20 Tips
A0.5	YN2300	YN2320	2000 / 2200	2013 / 2218						
A1	YN2301	YN2321	2001 / 2201	2014 / 2219	1431	1461		1401 / 1752	Y2270 / Y2284	
A2	YN2302	YN2322	2002 / 2202	2015 / 2220	1432	1462		1402 / 1753	Y2271 / Y2285	
A3	YN2303	YN2323	2003 / 2203	2016 / 2221	1433	1463		1403 / 1754	Y2272 / Y2286	
A3.5	YN2304	YN2324	2004 / 2204	2017 / 2222	1434	1464		1404 / 1755	Y2273 / Y2287	
A4	YN2305	YN2325	2005 / 2205	2018 / 2223	1435	1465		1405 / 1756	Y2274 / Y2288	
A0.50	YN2310		2006 / 2211							
A10	YN2311		2007 / 2212							
A20	YN2312	YN2332	2008 / 2213	2020 / 2229				1419 / 1770	Y2280 / Y2294	
A30		YN2333		2021 / 2230	1449	1479		1420 / 1771	Y2281 / Y2295	
B1	YN2306	YN2326	2062 / 2206	2066 / 2224				1408 / 1759	Y2275 / Y2289	
B2	YN2307	YN2327	2063 / 2207	2067 / 2225				1409 / 1760	Y2276 / Y2290	
B3								1410 / -	Y2277 / Y2291	
C2	YN2308	YN2328	2064 / 2208	2068 / 2226				1412 / 1763	Y2278 / Y2292	
C3								1413 / -	Y2279 / Y2293	
D2	YN2309	YN2329	2065 / 2209	2069 / 2227						
Incisal	YN2314	YN2334	2010 / 2215	2023 / 2232				1415 / 1766	Y2282 / Y2296	
Bleach White	YN2315	YN2335	2011 / 2216	2024 / 2233				1416 / 1767	Y2283 / Y2297	
Milky White		YN2336		2026 / 2235						
Cervical		YN2337		2027 / 2236						
Gum					1451					
Translucent						1482				
Universal							2030 / 2028	2034 / 2032		
Dentin							2031 / 2029			
A								2035 / 2033		
Needle Tips										
20 Gauge (50)			1484	1484	1484	1484	1484			



**Beautifil II Kits**

**Beautifil II 6 Color Set (1775)**

- (6) 4.5g syringes (A2, A3, A3.5, B2, A30, INC)

- Bonus Items: Dura-White Stone, Super-Snap Singles, OneGloss Trial Set

**Beautifil II Tips 6 Color Set (1776)**

- 6 tip colors (120) 0.25g tips (A2, A3, A3.5, B2, A30, INC)

- Bonus Items: Dura-White Stone, Super-Snap Singles, OneGloss Trial Set

**Beautifil II Cosmetic Set (1777)**

- (3) 4.5g syringes (A2, A3, INC)

- 2g Beautifil Opaquer-LO

- 2g Beautifil Flow F02 (A2)

- Bonus Items: Dura-White Stone, Super-Snap Singles, OneGloss Trial Set



**NEW! Beautifil II LS Intro Tip Kit (BIILSK1)**

- (20) 0.25g tips (A2, A3.5)

- (2) OneGloss PS Midi-Pt

**NEW! Beautifil II LS Bulk Tip Kit (BIILSK2)**

- (90) 0.25g tips (A2)

- 25-Hole BurButler with Tall Lid

**NEW! Beautifil II PINK Kit (GMK1)**

- (5) 2.5g Gingiva syringes

- 2g Beautifil Flow Gingiva syringe

- Bonus Items: 4 Beautifil Flow Plus F00 & F03 Tips, 2 Beautifil II A2 Tips

**NEW! Beautifil II PINK & WHITE Kit (GMK3)**

- (5) 2.5g Gingiva syringes

- 2g Beautifil Flow Gingiva syringe

- (4) 2.5g Beautifil II Enamel syringes

- Bonus Items: 10 Beautifil Flow Plus F00 & F03 tips, 10 BeautiBond Unit Dose, 10 Super-Snap Singles Mini

- Refer to the Beautifil II section for the Gingiva & Enamel syringe item numbers

- Refer to the Beautifil II section for the Gingiva & Enamel syringe item numbers

- Refer to the Beautifil II section for the Gingiva & Enamel syringe item numbers



**Beautifil Flow Plus Kits**

**Zero Flow (F00) Kit (2000BF00)**

- 2.2g syringe of each A1, A4

- (2) 2.2g syringes of each A2, A3

- (50) 0.1mL BeautiBond Unit Dose, 50 microbrushes

**Low Flow (F03) Kit (2000BF03)**

- 2.2g syringe of each A1, A4

- (2) 2.2g syringes of each A2, A3

- (50) 0.1mL BeautiBond Unit Dose, 50 microbrushes

**Beautifil Flow Plus Trial Kits**

**Standard Trial Kit (2000S)**

- 2.2g syringe each of F00 (A2 and A3)

- 2.2g syringe each of F03 (A2 and A3)

- Additional Shofu samples

**Pedo Trial Kit (2000P)**

- 2.2g syringe each of F00 (A1, BW)

- 2.2g syringe each of F03 (A1, BW)

- Additional Shofu samples



**BeautiBond Kits**

**BeautiBond Unit Dose (1782)**

- (50) 0.1mL unit doses, 50 microbrushes

**BeautiBond Bottle (1781)**

- 6mL, 50 microbrushes



**USA**

Shofu Dental Corporation  
1225 Stone Drive  
San Marcos, CA 92078-4059,  
USA

**JAPAN**

SHOFU Inc.  
11 Kamitakamatsu-cho  
Fukuine, Higashiyama-ku  
Kyoto 605-0983, Japan

**SINGAPORE**

Shofu In. Singapore Branch  
10 Science Park Road #03-12  
The Alpha, Science Park II  
Singapore 117684

**U.K.**

SHOFU UK Riverside House,  
River Lawn Road, Tonbridge,  
Kent, TN9 1EP, UK

**CHINA**

Shofu Dental Trading  
(Shanghai) Co. Ltd.  
No.645 Jiye Road  
Seshan Industry Park  
Songjiang 201602, Shanghai,  
China

**GERMANY**

EU Representative:  
Shofu Dental GmbH  
Am Brüll 17  
40878 Ratingen,  
Germany