



**BIO COMPOSANTS
MÉDICAUX**

FIBERFORCE™

**FIBER FORCE IT NOW...
OR FIX IT LATER!**



RESIN-IMPREGNATED FIBER REINFORCEMENT PRODUCTS FOR :

- FULL DENTURE FABRICATION
- DENTURE REPAIR AND ADDITIONS
- IMPLANT-SUPPORTED DENTURES
- REINFORCEMENT OF DENTAL APPLIANCES



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FIBER FORCE™

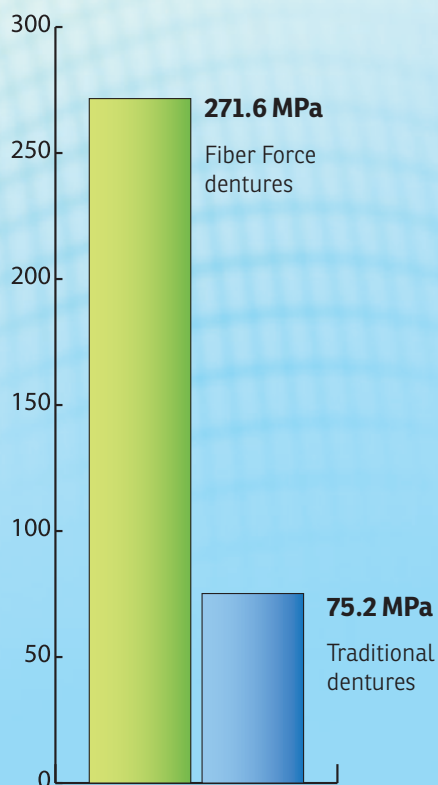
reinforcement products represent an effective solution to the challenges faced by dental professionals of providing stronger and more esthetic removable and temporary prosthesis.

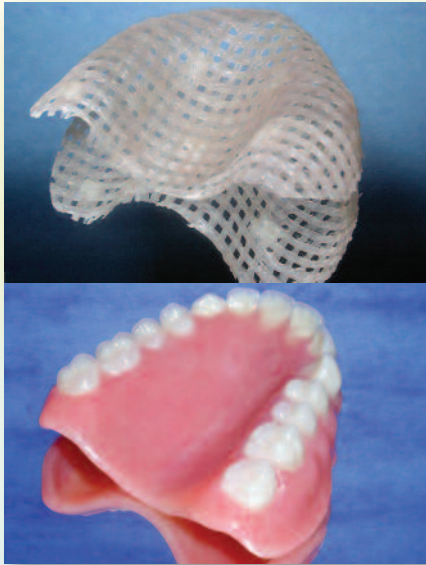
Developed and manufactured in the french "silicon valley" (Grenoble), FIBER FORCE™ engineers have developed a fiber reinforcement system that can be incorporated into applications using acrylic resins. FIBER FORCE™ use advanced e-glass fibers that are specially treated and impregnated with a light-cured resin in an industrial process that ensures homogeneity with the finished acrylic resin.

FIBER FORCE® ADVANTAGES

- Create dentures that are up to 3 times stronger
- Bonds to all methacrylate resins for a "monobloc" design
- Esthetic – uses translucent fibers that are invisible once in place
- Thinner, more comfortable and lightweight dentures
- Ideal combination of strength, flex, comfort and cost for implant-supported dentures
- Techniques are fast, easy and offer consistent results
- Much easier to mould, handle and use than metallic alternatives
- Metal-free, BisGMA free, epoxy free

FRACTURE RESISTANCE





FULL DENTURES

Dentures break because the acrylic resin used to make them is fragile. They can easily fracture due to shock if dropped. Denture base resin is exposed to various stresses on mastication such as compressive strength, tensile stress and shear stresses (Beyli, 1981). Flexural fatigue occurs after flexing the material repeatedly and the structure eventually fails. This is due to the development of microscopic cracks in areas of stress concentration which quickly grow to significantly weaken the material (Wiskot, 1995). Traditional metal reinforcement solutions are not ideal as they only increase transverse strength slightly (Jenning, R.E. & Wuebbenhorst, A.M., 1960). They don't bond to denture resin, they are difficult to form and work with, they are not esthetically pleasing, and add unnecessary weight, impacting patient comfort.

Technique The simple FiBER FORCE™ technique is an ideal option to offer to all patients in need of full dentures.



IMPLANT-SUPPORTED DENTURES AND OVER DENTURES

Removable dentures that are held in place by fixed attachments either on existing roots or implants are subject to significant stress and warping at the attachment sites, which can fatigue and break the denture. Generally accepted solutions consist on cast frameworks or machined metal bars to prevent this breakage. These bars add significant weight and rigidity to the prosthesis, preventing it from accompanying the natural physiological flex of the patient's jaws.

Technique FiBER FORCE™ offers an easy and inexpensive alternative to metal bars, much more esthetic, comfortable, highly resistant to fatigue, and that offers bio-mechanics more similar to those of mandibular bone. A similar approach has been taken in aeronautics for all structures that must be lightweight and fatigue resistant.

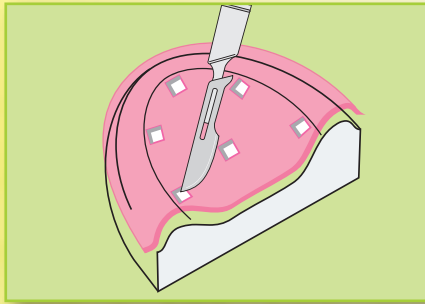


REPAIRS OF EXISTING DENTURES AND ADDITIONS TO DENTURES

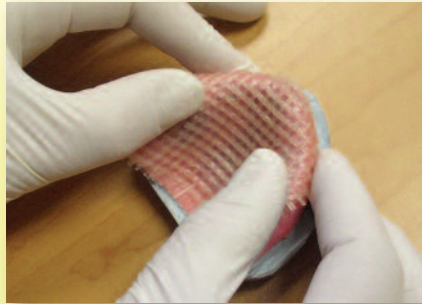
Polymethyl methacrylate denture resins are fragile and, as a result, many dental professionals must deal with the ongoing and frequent problem of denture repairs. Studies have confirmed that dentures that are repaired using current methods do not regain the strength of the original denture.

Technique One study has confirmed that dentures repaired with fiber reinforcements are 58% stronger than the original dentures and 166% stronger than dentures repaired with acrylic alone.

ABBREVIATED FRAMEWORK



1 Adapt spacer wax to model



2 Place FIBER FORCE™ mesh on model



3 Adapt mesh to model with the EZ VAC vacuum unit



4 Place EZ Vac into light curing unit

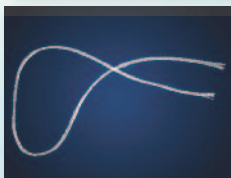


5 Prepare cured FIBER FORCE™ framework for processing into denture, using your usual technique

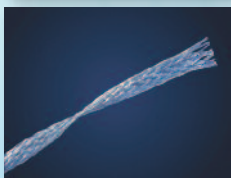
Use of the EZ Vac manual vacuum allows the technician to quickly and easily fabricate custom-fitted, top quality frameworks – saving time and eliminating frustration.



Mesh
80 x 53 mm
Qty: 2
(Pink only)



Braid
Ø 0,8 x 150 mm
Qty: 2
(Pink or White)



Ribbon
Ø 2,0 x 0,5 x 150 mm
Qty: 2
(White only)



UD Fiber
Ø 2.0 x 150 mm
Qty: 2
(Pink or White)



Braid
Ø 2.2 x 150 mm
Qty: 2
(Pink or White)



Light Cure Resin
3ml + 4 tips
Qty: 1
(Pink or White)



EZ VAC
Vacuum forming system
Qty: 1

REFERENCES:

Kim SH, Watts DC. The effect of reinforcement with woven E-glass fibers on the impact strength of complete dentures fabricated with high-impact acrylic resin. Department of Prosthetic Dentistry, Ewha University, Seoul, Republic of Korea

ESQUEVIN - Action physiologique des fibres minérales artificielles. Les filaments de verre et la santé. Vetrotex international. Chambéry, Mars 1990

Reinforcement of acrylic denture base resin by incorporation of various fibers. San-Yue Chen¹, Wen-Miin Liang², Pau-Su Yen¹

1. School of Dentistry, China Medical College, Taichung, Taiwan, R.O.

2. School of Public Health, China Medical College, Taichung, Taiwan, R.O.C

Strength of repaired and reinforced denture base polymer K.K. NARVA¹, G. POLYZOIS², L.V.J. LASSILA¹, and P.K. VALLITTU¹,

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2. University of Athens Dental School, Greece.

VIDEO ON

YouTube Bio Composants Médicaux

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