

The manufacturing process of a FiberForce CST framework has been developed to obtain a highly resistant and aesthetic implanted self-supporting acrylic denture which doesn't require standard metal reinforcements.

CST resin contains no Bisphenol A, no BiS-GMA, no epoxy and no BPA derivatives

PRECAUTIONS:

A three-dimensional fiber structure is easily manufactured using light-cured fiberglass braids which are securely fixed around implant pillars.

The positioning of the reinforcements has been studied by our engineers to minimize any fracturing of the acrylic resin even when off-centre stress loads are applied. The strength of the self-supporting structure once it is incorporated within the acrylic resin is dependent on the protocol being followed closely.

The reinforced structure is compatible with all available resins.

It can be used with all moulding procedures such as injection, compression and cold moulding and all types of light-curing.

Medical device for dental treatment, reserved for healthcare professionals. Please read the instructions on the leaflet or on the label carefully before use. Class : IIA (CE marking certified by SGS) CE1639.

VIDEO ON

 **Bio Composants Médicaux**



FIBERFORCE CST™

CABLE STAYED TECHNOLOGY



30 MINUTES STEP-BY-STEP
MANUFACTURING PROCESS OF A
FIBERFORCE CST™
FRAMEWORK

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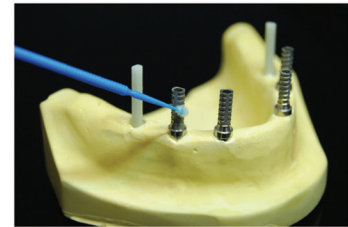
BIO COMPOSANTS MÉDICAUX
215, route de Bavonne - ZA le Talamud
38140 Saint-Blaise-du-Buis
+33 (0)4 76 07 79 57

dentalbcm.com
contact@biomedicaux.com

BIO COMPOSANTS MÉDICAUX

**1 • PREPARING
IMPLANT PILLARS**

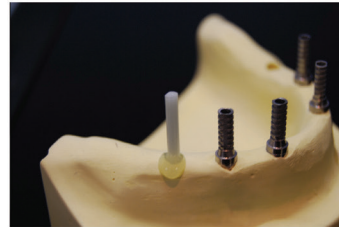
- A** Trim the pillars to the required height.
- B** Sand blast the pillars using aluminium oxide.
- C** Apply a silane and leave it to dry.
- D** Coat the pillars with a dental adhesive .



Comments:
If a distal extension is necessary, the maximum distance from the distal implant is 11 mm.
When a distal extension isn't required, the right and left distal implants must be secured by a double wind (a single wind used around a tension pin is not sufficient in this case).

**2 • PREPARING
THE FRAMEWORK
FOR THE BRIDGE**

- A** Cover the plaster model with a wax.
- B** Position the right and left tension pins (fiber post): the tension pins enable the fiber reinforcements to be placed under tension.

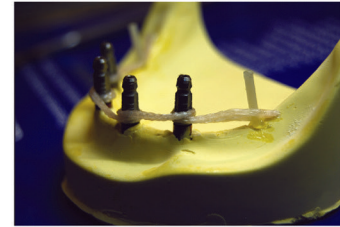


- Using a bur fissure drill, drill a 3 or 4 mm deep cylindrical hole in the plaster; 11 mm maximum from each of the distal implants.
- Fill the hole with pink BioFlow light-curing resin and insert an extension pin post. Light-cure with an appropriate hand-held lamp (blue light- maximum absorption is reached at 460 nanometres)

Comments:
While processing, ensure the braid is kept taut at all times.

**3 • CREATING
THE FRAMEWORK
FOR THE BRIDGE**

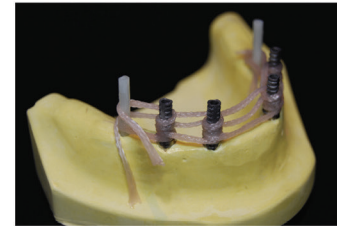
- A LOWER REINFORCEMENT ROW:**
Begin by attaching a 450 mm length of a **hybrid 1:6 braid** to the right tension pin with a clip avoiding the mucous support.



- B** Wind the braid around the base of the right tension pin and light-cure or hold in place with the clip.
- C** Keeping the braid taut, wind it once completely in an anticlockwise direction around the base of the first pillar and repeat the process around the second pillar. Light cure the positioned braid avoiding the rest of the braid. Then, repeat this whole process until the left tension pin has been wound and light-cured.

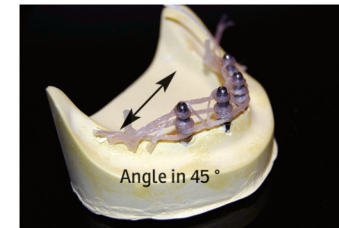
- D MIDDLE REINFORCEMENT ROW:**
Continue with the second reinforcement row by winding the braid in a clockwise direction around each pillar, working towards the left tension pin. Light-cure the braid on every second pillar as before.

- E UPPER REINFORCEMENT ROW:**
Keeping the braid taut, create an upper reinforcement row by repeating the winding of the pillars and the light-curing of the braid finishing at the left tension pin. **Holding it at approximately 45°** pull it towards the first pillar. And then, light cure the whole framework.

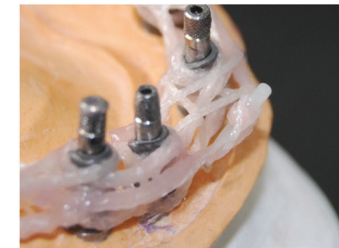


- F STABILISING REINFORCEMENTS:**
These reinforcements are used to hold the acrylic resin perfectly in place even when off-centre stress loads are applied. Begin with a **300 mm length of a 1:4 hybrid braid** at the base of the tension pin.

mm odcinka włókna



Holding the braid taut, wrap it around the reinforcement rows of the first structure, firstly from left to right and then back along the structure from right to left, making sure the lines of braid cross over one another.



- G** Put the FiberForce CST framework in a light-curing unit respecting the recommended photo-polymerization time.
- H** Using a disc, cut away any ends of fiber.
- I** Cut the tension pins at their base.

**4 • SETTING
THE STRUCTURE
IN THE ACRYLIC RESIN**

- A** Proceed in accordance with protocols practised in your laboratory.
- B** Make sure the whole FiberForce CST framework is immersed in the resin.

