### Production of a non-removable denture with FIBER FORCE CST®

1. Install the selected titanium temporary cylinders onto the final working model using the procedures recommended by the cylinder supplier. Ensure the cylinders are sandblasted using aluminum oxide before they are installed. 110 microns or Rokatec is recommended.

2. Apply sliane onto the temporary cylinders following the procedures recommended by the sliane supplier.

3. Apply one coat of light-cure adhesive primer (not included) to the temporary cylinders, light-curing each for thirty (30 seconds) after application, or light curing all cylinders at once by placing the light into a curing oven for between 30 and 90 seconds depending on the light curing oven being used.

4. Support Pillars: Place two glass fiber pillars into the model approximately 10mm downhill from the most distal implant position on both distal implant sites.

- These can be glazed into position using the FIBER FORCE CST® Flow Pink light cure composite after a small retention hole is drilled into the model using an appropriate drill. These pillars will permit tension to be maintained while the walls of the denture are built. 

5. Cable Run #1 - Horizontal cable: Begin with the FIBER FORCE CST® (1:6) hybrid fiber rope. Apply a drop of FIBER FORCE CST® Flow Pink resin on the lingual surface of the support pillar, place the rope on the lingual surface of the support pillar, 1.1mm above the crest of the ridge, secure the rope to the pillar by quickly and carefully spot tacking it with a hand-held curing light. (It is recommended to leave a 18mm tail on the end of the rope). The (1:6) fiber rope is now wrapped around the distal/ posterior aspect of the support pillar, and wrapped around to the buccal surface in a parallel position to the ridge of the fiber rope. The fiber rope is laid across the buccal surface of the first implant, circle around the implant cylinder in a mesio-lingual direction commencing from below the first cylinder which places the (1:6) fiber rope in a stacked position over the buccal aspect of the initial fiber rope. Continue in this manner until all of the implant cylinders and the support pillar on the opposite side of the arch have been wrapped with one run of fiber rope maintaining the slight tension of the fiber rope throughout the procedure. 

6. Cable Run #2 - Mid-horizontal cable: Repeat the Cable #1 technique by wrapping the support pillar in a 180° turn to continue back around the arch, maintaining a lingual position of the (1:6) fiber rope. The (1:6) fiber rope is oriented against the lingual surface of the implant cylinder and wrapped around each cylinder in the same manner, utilizing the support pillar in which the procedure was started.

7. Cable Run #3 - Upper-horizontal cable: Wrap the support pillar with 180° turn, this time the (1:6) Fiber rope is brought to an approximate 45° from the support pillar back to the buccal surface of the implant cylinder. Wrap all implants with the technique used in steps 5. Wrap the last implant cylinder and again position the (1:6) rope at a 45° angle and tack the rope to the support pillar with a drop of flow resin and secure with the curing light. 

   - This horizontal structure can be considered as the “bridge” for the framework.

   - The three “runs” of horizontal (1:6) fiber rope are made in one continuous run, maintaining an equal tension of all three runs. The fiber rope may be compressed with a tweezers or similar instrument as the runs are being placed to minimize the physical space that the CST® framework will occupy.

8. **Cable Run #4 - Vertical Splay or Stringer Installation**: The bridge framework is now going to be secured and reinforced by applying a “Splay” or “Stringer” technique. The FIBER FORCE CST® (1:4) compressible hybrid fiber rope is tapped in place on the support pillar using the same technique to secure the (1:6) rope to the support pillar. This procedure will be executed in a vertical direction, begin by wrapping the (1:4) fiber rope around the distal aspect of the support pillar to a buccal position using a tweezers or similar instrument bring the end of the rope under the horizontal bottomstrand of the framework to the lingual side, in a continuous motion bringing the (1:4) rope up over and over the top horizontal strand of framework. Once again from the buccal side wrap under to the lingual. This procedure is continued until the horizontal framework has been wrapped vertically from one support pillar to the other on the opposite side of the arch. Upon reaching the second support pillar the technique is repeated back to the starting point, again using a buccal start going under the bottom strand to the lingual, up and over crossing (making an X) the first run of vertical “Stringer” this “over/under”, “out and back” run of stringers does not need to wrap around the implant cylinders. It is important to maintain a cross-over (X) of the (1:4)-fiber rope, and consistent tension as the horizontal framework is wrapped in this vertical direction.

   - Note: The horizontal framework strands can be compressed together using extra tension if a reduced VDO is indicated.

   - Attention: Starting the string/runner from the buccal side and coming under the base cable structure to the lingual side, then back over the top of the base cable structure and continuing in that manner across the full length of the base structure is the key to correct placement of the string/runner fiber.

9. The working model is now placed into a light curing unit to polymerise the FIBER FORCE CST® fiber cable implant framework. Curing time will vary depending on the power of the light curing unit-usually from two to six minutes. It is not possible to over-cure the FIBER FORCE CST® fibers, so when in doubt extend the curing time.

10. Using a bur or die the pillars are cut at the base of the model so that the framework can be removed. The portion of the pillars left in the framework can be removed or left in place at the discretion of the technician.

11. Once light cured, the CST® framework can be tried in-mouth to verify the passivity of fit. If a passive fit is not obtained the framework must be sectioned and the correct alignment re-established using usual protocols and the framework re-made.

12. Once the fit is confirmed the finished CST® framework is now ready to be incorporated into the set-up of the definitive appliance. Cured FIBER FORCE CST® fibers can be boiled out with water or steam without causing any damage to the framework. Applying a thin layer of sliane to the fibers after boil out is recommended.

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### Notes

- **The preferred processing technique can be used by the technician to complete fabrication of the appliance:**

- **When light curing FIBER FORCE CST® fibers, Flow composite, and Bond resin please note that any VLC (Visible light curing) LED unit can be used.**

### Limitation of liability

Except where prohibited by law, Synca Marketing Inc. will not be liable for any loss or damage arising from this product, whether direct, indirect, special, incidental or consequential, regardless of the theory asserted, including warranty, contract, negligence, or strict liability.

The information provided for FIBER FORCE CST® products is based on comprehensive research and experience in application technology. Results are furnished on the best of our knowledge, subject to technical changes within the framework of product development. However, users must comply with and consider all recommendations and information in connection with any use.

### Disclaimer of all other Warranties

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**FIBER FORCE CST instructions V3** 2019-11-27

### Instructions for Use

- **SYNCA 337 Marion, Le Gardeur, QC, Canada, J5I 4W8**

#### Description

FIBER FORCE CST® is a series of glass fiber pre-impregnated with light curing methacrylate-resin (prepreg). FIBER FORCE CST® can be custom shaped and then polymerized by light curing. Designed for a dental office or a dental lab, easy-to-use FIBER FORCE CST® is incorporated into a removable denture to provide a solid and esthetic reinforcement. FIBER FORCE CST® is also indicated to reinforce temporary dental acrylics. FIBER FORCE CST® is compatible with all types of methacrylate resins (self-cure, heat-cure, pressure-cure and microwaveable).

#### Indications

- FIBER FORCE CST® is used for the structural reinforcement in the production or repair of removables dentures made from methacrylate resin. Different configurations and associated resins are available.

- FIBER FORCE CST® configurations are selected and used according to the application and space available.

- A corresponding pink resin is used in conjunction with the selected configuration(s)

#### Contraindications

- Allergies to methacrylates

#### Side effects

- With the current state of knowledge, there are no known side effects.

#### Precautions

- Always wear goggles to avoid handling FIBER FORCE CST® with fingers: non-cured resin may irritate fingers and eyes.

- Sensitization from long-term exposure to the resin should not be ruled out as a possible hazard.

- Non-cured FIBER FORCE CST® should not come into contact with mucous tissues.

- Follow instructions in order to completely cure FIBER FORCE CST®.

- When cutting or grinding cured splints, wear protective glasses, masks, gloves, and appropriate air evacuation. Fiberglass particles may irritate skin.

- In case of irritation, discomfort may be relieved with mild soap and water (light rubbing).

- Once package is opened, FIBER FORCE CST® must be used quickly without exposure to light (sunlight as example: risk of premature curing).

#### Composition (% by weight)

<table>
<thead>
<tr>
<th>Material</th>
<th>Content</th>
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<tbody>
<tr>
<td>Preshaped fibers</td>
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<tr>
<td>Glass fiber</td>
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<tr>
<td>Urethane dimethylactate</td>
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<td>Triethylene glycol dimethacrylate</td>
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<tr>
<td>Inorganic elements and pigments</td>
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<td>Cytostabilizers</td>
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#### Limitation of liability

Excerpt from the disclaimer of all other warranties, including warranty, contract, negligence, or strict liability.

The information provided for FIBER FORCE CST® products is based on comprehensive research and experience in application technology. Results are furnished on the best of our knowledge, subject to technical changes within the framework of product development. However, users must comply with and consider all recommendations and information in connection with any use.

#### Disclaimer of all other Warranties

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**FIBER FORCE CST instructions V3** 2019-11-27

**SYNCA 1-800-667-9622 www.synca.com**