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 methacrylates (jef cur, heat-cure, pressure-cure and monomerizable). FIBER FORCE® CST BOND is a solvent-free, single-ingredient light-curing bonding resin.

Indications

FIBER FORCE® CST is used for the structural reinforcement in the production of or repair of removable 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 mix 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 gloves to avoid handling FIBER FORCE® CST with fingers: non-cured FIBER FORCE® CST can irritate fingers and eyes.
• Sensitization from long-term exposure to the resin should not be ruled out as a possibility.
• Non-cured FIBER FORCE® CST should not come into contact with mucous tissues.
• Follow instructions in order to completely cure FIBER FORCE® CST.

Directions for Use

1) Install the selected titanium temporary cylinders onto the final working model. Ensure the cylinders are sandblasted using alumina oxide before they are installed, 110 microns or Rotek is recommended.
2) Apply silane onto the temporary cylinders following the procedures recommended by the silane supplier.
3) Apply one coat of FIBER FORCE® CST Bonding agent to the temporary cylinders, light curing each cylinder for thirty (30) seconds after application, or light curing all cylinders at once by placing the model into a light 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 distal to the most distal implant position on both sides of the arch. These can be glued 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 cables are described below are being made.
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, 1.5mm above the crest of the ridge, secure the rope to the pillar by carefully and carefully spot tacking it with a hand-held curing light (it is recommended to leave a 8-10mm tail on the end of the rope), the (1:6) fiber rope is now wrapped around the distal /posterterior aspect of the support pillar resin may irritate skin. In the case of irritation, discomfort may be relieved with mild soap and water (light rubbing)
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 the implant cylinder in the same manner, until reaching 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 the implant cylinders and again position on 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.

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

• Sensitization from long-term exposure to the resin should not be ruled out as a possibility.
• Apply silane onto the temporary cylinders following the procedures recommended by the silane supplier.
• Apply one coat of FIBER FORCE® CST Bonding agent to the temporary cylinders, light curing each cylinder for thirty (30) seconds after application, or light curing all cylinders at once by placing the model into a light curing oven for between 30 and 90 seconds depending on the light curing oven being used.
• Support Pillars: Place two glass fiber pillars into the model approximately 10mm distal to the most distal implant position on both sides of the arch. These can be glued 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 cables are described below are being made.
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, 1.5mm above the crest of the ridge, secure the rope to the pillar by carefully and carefully spot tacking it with a hand-held curing light (it is recommended to leave a 8-10mm tail on the end of the rope), the (1:6) fiber rope is now wrapped around the distal /posterterior aspect of the support pillar resin may irritate skin. In the case of irritation, discomfort may be relieved with mild soap and water (light rubbing)
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 the implant cylinder in the same manner, until reaching 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 the implant cylinders and again position on 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.

Note: The three “runs” of (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 Stay or Stringer Installation: The bridge framework is now going to be secured and reinforced by applying a “Stay” or “Stringer” technique. The FIBER FORCE® CST (1:4) compressible hybrid fiber rope is tacked 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 (1:6) 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 bottom horizontal strand of the framework to the buccal side, in a similar motion bringing the (1:6) rope up into the top horizontal strand of framework. Once again from the buccal side wind under to the lingual side. This procedure is continued until the horizontal framework has been wrapped vertically from one support pillar to the other to 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 (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 (1:6) 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 stay/stringer run from the buccal side and coming under the base cable structure to the lingual side, then back over the lingual side to 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 stay/stringer fiber.

9) The working model is now placed into a light curing unit to polymerize 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 drills 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 frame work 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 framework is now ready to be incorporated into the set-up of the definitive appliance. Cured FIBER FORCE® CST® fibers can be boiled with water or steam without causing any damage to the framework. Applying a thin layer of silane to the fibers after boil out is recommended.

Curing Times

<table>
<thead>
<tr>
<th>Type of lamp</th>
<th>2014-03-24</th>
<th>2015-03-24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base cable</td>
<td>2 minutes</td>
<td>2 minutes</td>
</tr>
<tr>
<td>Stay/stringer cables</td>
<td>2 minutes</td>
<td>3 minutes</td>
</tr>
</tbody>
</table>

Note

Product reserved exclusively for dental usage. Keep out of the reach of children.

Single use product.

Avoid exposure to light.

See the instructions.

Can cause skin allergies.

FIBER FORCE® CST Store between 54˚F and 86˚F (12˚C and 30˚C), in its original closed packaging.

FIBER FORCE® CST Store between 32˚F and 77˚F (0˚C and 25˚C), in its original closed packaging.

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 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.

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