

## PRODUCT DESCRIPTION

Carbon spike anchor CSA™ consisting of uni-directional carbon fibres. A specialized epoxy coating is used to adhere aggregate to the precured portion of the anchor. The anchor design and installation methodology is intended to eliminate field errors and enhance field quality assurance. Anchors are effective in limiting the extent of debonding along the laminate. CSA™ increases the axial strain and the strength of the interface between the surface and the composite fiber.

## PRODUCT FEATURES

- Extreme light-weight.
- Excellent adhesion to resin or expansive cement substrates Easy to use material.
- It can be used as a near-surface mounted strengthening system.
- Long working time.
- High tensile modulus and strength.
- High mechanical and chemical resistance.

## PRODUCT USES

- Anchoring and transferring of stresses from the reinforcement surface and the reinforced structure.
- Enhancing of pre-stressed FRP strengthening system.

## HOW TO USE

### SURFACE PREPARATION

At the time of application of CSA™, all the surfaces must be cleaned from dirt, grime, dust, curing compounds, oils, grease, waxes and all the other contaminated materials. Concrete surfaces must be fully dried or cured so adhesive can properly dry.

### APPLICATION:

Apply the epoxy to the spike anchors by hand. The fully saturated spike is then applied as detailed on the project.

### TECHNICAL DATA

|                     |          |
|---------------------|----------|
| Tensile Strength    | 4.90 GPa |
| Tensile Modulus     | 230 GPa  |
| Ultimate Elongation | 1.7%     |
| Shelf life          | 10 years |

## HANDLING

Approved personal protection equipment should be worn at all times. Particle mask is recommended for possible airborne particles. Gloves are recommended when handling mortar to avoid skin irritation. Safety glasses are recommended to prevent eye irritation. Wear chemical resistant clothing/gloves/goggles. Ventilate area. In absence of adequate ventilation, use properly fitted respirator.

## STORAGE

Store in dry, shaded conditions away from sources of heat, ignition, flame or other hazards (5-30°C). Avoid moisture and water contamination.



Carbon Spike Anchor- CSA™

## FIRST AID

All components of FRP systems may cause skin irritation and sensitization. In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with plenty of water; contact physician immediately. For respiratory problems, remove to fresh air. Wash clothing before reuse.

## DISCLAIMER OF LIABILITY

AFZIR, LLC warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within six months of the date of purchase.

AFZIR shall not be liable for any consequential or special damages of any kind, resulting from any claim or breach of warranty, breach of contract, negligence or any legal theory.

The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before committing to production.