

PRODUCT DESCRIPTION

CRR™ Carbon Rebar is an extremely strong and light fiber-reinforced polymer rebar which contains carbon fiber. CRR™ is used as internal or external reinforcement providing additional strength and stiffness to concrete and masonry structural elements. As a result of its excellent properties, CFRP Rebar is used primarily in the construction industry to assist in building structures such as condominiums, office buildings, and shopping malls. CRR™ rods are usually used with the Near Surface Mounted (NSM) installation technique.



Carbon Rebar- CRR™

PRODUCT FEATURES

- Fast installation time.
- Better fire resistance.
- Non-corrosive.
- Reinforcement protected from mechanical and environmental damage
- Very high strength
- CRR™ rods can be effectively anchored into adjacent members.
- Light-weight.
- Low impact on member appearance and aesthetically pleasing.

PRODUCT USES

It is used primarily as an alternative to steel reinforcement in concrete structures such as:

- parking structures
- bridge decks
- highways under extreme environments
- structures highly susceptible to corrosion and magnetic fields

HOW TO USE

SURFACE PREPARATION

Bond-inhibiting materials must be removed from the surface prior to application using clean pressurized air. All dust, laitance, grease, curing compounds, waxes, deteriorated materials, and other bond-inhibiting materials must be removed from the surface prior to application.

Corrosion of internal steel reinforcement should be adequately addressed prior to installing the Afzir product. Make grooves onto the surface of the concrete element. Minimum groove width and depth is 1.5 times the rod diameter. Groove surfaces must be clean and sound. It must be dry and free of frost.

CUTTING CRR™ CARBON REBAR

Rods may be cut to an appropriate length with a diamond blade on a chop saw or grinder. The rods should be wrapped with duct tape in the cutting zone to minimize splintering.

APPLICATION

Grooves should be cut into the surface of the substrate to receive Afzir CRR™ Rods. After preparing and cleaning the surface, apply the adhesive resin and/or putty filler. The grooves approximately half-full. Depending on the temperature, press the rods into the epoxy in the grooves. Apply additional epoxy over the rods to fill in the grooves. Strike the surface with a trowel to force out any air and provide a clean installation.

TECHNICAL DATA

Primary Fiber Direction	0 Degree (Unidirectional)
Fiber Type	Carbon
Matrix Type	Epoxy Vinylester Resin
Fiber Volume Fraction	70%
Tensile Strength	2,068 MPa
Modulus of Elasticity	131,000 MPa
Elongation at Break	1.58%

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 and ignition. Store rods in original packaging until ready to use. Keep dry and free from dust and oil. Shelf life is 10 years

CAUTION

All components of FRP systems may cause skin irritation and sensitization. Use of chemical resistant gloves is recommended. Avoid breathing vapors and dust. Get medical attention if you are breathing with difficulty. Resins products can cause strong eye irritation. Avoiding eye contact and Using safety goggles is necessary.

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.

