

Carbon fiber rebar for structural strengthening

DESCRIPTION

Wolfix WFC-Rebar is extremely strong and light fiber-reinforced polymer rebar which contains carbon fiber, it 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, Wolfix WFC-Rebar is used primarily in the construction industry to assist in building structures such as condominiums, office buildings, and shopping malls. It is usually used with the Near Surface Mounted(NSM)installation technique.

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

GENERAL FEATURES

- Fast installation time
- Better fire resistance
- Non-corrosive
- Reinforcement protected from mechanical and environmental damage
- WFC-Rebar can be effectively anchored into adjacent members
- Light weight easier to install
- Less impact on structure appearance

PRODUCT INFORMATION

+ Fiber direction

0° (unidirectional)

+ Packaging:

50m or 100m/roll



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+ Shelf life	10 years
+ Storage conditions:	Store dry at -5°-40°
+Density of materials	1.65g/cm ³
+ Fiber content	70%
+Diameter	6mm, 8mm, 10mm, 12mm, 16mm

TECHNICAL INFORMATION

+ Dry fiber properties

 Tensile strength 	4900MPa
 Modulus of elasticity 	235GPa
 Elongation at break 	1.6%

+ Carbon fiber rebar properties

 Tensile strength(Average) 	1800MPa
 Modulus of elasticity 	140GPa
 Elongation at break 	1.58%

APPLICATION INSTRUCTIONS

+ Substrate 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 WFC-Rebar product. Make grooves on to 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.



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+ Treatment

Rods maybe 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 WFC-Rebars. After preparing and cleaning the surface, apply the adhesive resin and/or putty filer. The grooves approximately half-full

NOTICE

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.

FIRE PROTECTION

If necessary, WOFIX WFC-Rebar can be protected with fire protection plates. Depending on the fire resistance requirements, there are various alternative solutions. Please contact our technical services department.

ENVIRONMENT, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products.



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POINTS FOR ATTENTION

The construction workers should take protective measures such as wearing masks, gloves, goggles etc.

Pay attention to fire prevention and maintain good ventilation on site. Carbon fiber material is conductive, be careful to the electrical equipment around.

