

THE SOLUTION

FLEXCOAT

WATERPROOFING PRODUCTS



CARBON FIBER REINFORCED POLYMER

as member of:



CARBON FIBER REINFORCED POLYMER

What is Carbon Fiber Reinforced Polymer?

The basic constituents of **CFRP** are **fibers** such as **carbon**, **aramid** and or **glass** and a **resin matrix**. The fibers come in the form of a **flexible fabric** that is **saturated** in the field and is **bonded** to substrate, using a specially formulated structural epoxy.

Carbon Fiber is an **exceptionally strong** and **versatile material**, with special characteristics that make it the solution of choice in a growing range of applications, from underground pipe repair to historic preservation.

Carbon Fiber's anisotropic properties, different when measured along different axes, allow for exactly the required strength in each direction. This makes Carbon Fiber particularly effective for seismic conditions.

Characteristic of Carbon Fiber

CFRP's - are very flexible prior to curing, they can be easily applied to surfaces of varying shapes.

CFRP's - are light enough to be handled without lifting equipment on the job site, enough to be applied to low access spaces without interrupting operations

---adding as little as 1/8-inch thickness to surfaces

The minimal change to mass of structure also eliminates the need to make foundation adjustment or other costly construction, or other costly construction, reducing overall project costs

Advantages of Carbon Fiber

- Non-intrusive
- Quick and easy to apply even in tight spaces
- Flexible and versatile, adapting to any structural shape
- Lightweight
- High tensile strength and excellent fatigue behavior
- Non-toxic
- Odorless
- Leak-proof
- Two to three times stronger than steel
- Corrosion-resistant
- Thermally compatible with common construction
- Low cost

Uses of Carbon Fiber

- Increase shear strength
- Increase flexural strength for both positive and negative moments
- Increase stiffness at service loads
- Reduce cracked widths for enhanced durability and corrosion resistance
- Provide containment
- Prevent leaks
- Enhance ductility



LUNETTA GRANDSTAND

Application of Carbon Fiber on the roofing to supplement the R270 in the under slabs for a stronger structure.

ENTRATA URBAN COMPLEX

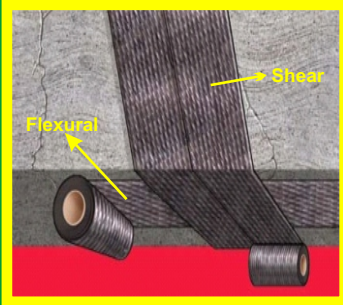
Application of Carbon Fiber on the slab, the beam and wrapped around the base of the column.

Application of Carbon Fiber on the beams in the basement parking area directly below the ramp/driveway to increase flexural and shear capacity.



CARBON FIBER REINFORCED POLYMER

BEAMS - CONCRETE



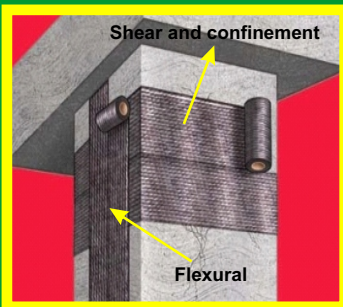
Carbon Fiber can increase flexural and shear strength of concrete beams...

- For flexural strengthening...
Carbon Fiber is bonded to the tension face
- For shear strengthening...
Carbon Fiber is bonded to the web of the beam

ADVANTAGES

- Restores full capacity of cracked girders
- Increases flexural capacity
- Increases fatigue life
- Eliminates stress concentration and residual stresses due to welding
- Increases stiffness
- Costs less than alternatives

COLUMNS - CONCRETE



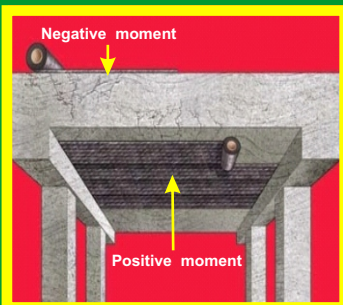
Carbon Fiber is used to increase ductility and strength of concrete columns.

- Due to beneficial effects of confinement, the column ductility is significantly increased.
- In addition, CFRP helps to make up for inadequate amount or improperly detailed lateral ties and increases the shear strength of the columns significantly.

ADVANTAGES

- Increases ductility
- Increases shear strength
- Increases axial load carrying capacity
- Light weight and easy to install
- Can be wrapped along columns with varying cross section
- Costs less than alternatives such as steel jacketing

CONCRETE SLABS

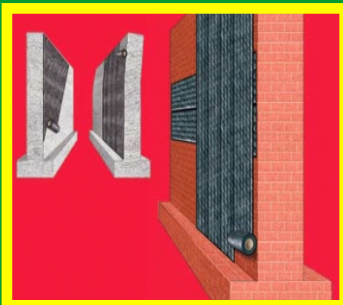


Carbon Fiber is bonded to the bottom of slabs (positive moment regions) ...or to the top of the slab (negative moment regions) to increase flexural capacity

ADVANTAGES

- Increases flexural strength
- Reduces deflections
- Lightweight and easy to apply
- Protects slab from further environmental damage
- Costs less than alternatives

BRICK WALLS



Carbon Fiber significantly increases the in-plane and out-of-plane strengths of unreinforced masonry and brick buildings.

- It is very lightweight and is applied to this type of structure in a manner similar to wallpapering, but at the same time it provides significant strength as if shotcrete had been applied to the structure.

Strengthening of Masonry and Brick Walls



We have [the solutions](#) for all structural repair, retrofit and rehabilitation works...

We provide innovative and effective structural repair services that...

- Cost only a fraction than the traditional methods
- Require a lot less installation time
- Cause the least intrusion and interruption as possible

LIST OF PRODUCT AND SERVICES

Fast Set Sprayed Elastomer Polyurea

Polyurethane Waterproofing System

Structural Strengthening System

Retaining Wall Waterproofing System

Roof Garden System

Flextorch Waterproofing Membrane

Flextorch Mineral Design Membrane

Cementitious Type Waterproofing System

Flexible Acrylic Waterproofing System

Sprayed Polyurethane Foam System

Structural Epoxy for Concrete Crack Repair

Special Coating Formulation

Protective and Reflective Paint



Ultramax II 1095



Reactor EXP-2



Ultramax II 795



Ultramax II 595



Texspray Mark V



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