

# WFN-300

## Carbon fiber mesh for structural strengthening

### DESCRIPTION

Wolfix WFC-N300 a special Bidirectional carbon product developed especially for reinforcement of stone and brick walls, and for strengthening and protection of historical area floors. The material is resistant to all kind of chemical environment, has high alkaline resistance and high performance, and it can be readily used in cement based applications.

### USES

#### ✦ **Load increases**

- Increased live loads in buildings
- Increased traffic volumes on bridges
- Installation of heavy Machinery in industrial buildings
- Vibrating structures
- Changes of building utilization

#### ✦ **Seismic retrofitting**

- Beam strengthening
- Column wrapping
- Masonry walls

#### ✦ **Aging and damage**

- Aging of construction elements
- Vehicle impact to the bridges
- Fire

#### ✦ **Change in structural system**

- Removal of walls or columns
- Removal of slab sections for openings

#### ✦ **Design or construction defects**

- Different design standard
- Mistake calculation
- Construction error

### GENERAL FEATURES

- It enables making interventions in structure in accordance with the properties of the original structure without any negative effect.
- Specially developed coating makes it compatible with different materials.
- High mechanical strength and high elastic modulus.
- Resistant to chemically aggressive and high alkaline environments.
- Minimizes the formation and propagation of cracks.
- Enables strengthening applications in irregular structures.
- Easily and rapidly applied.
- Broad and homogeneous mechanical recovery.

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### PRODUCT INFORMATION

✦ <b>Fiber type:</b>	Bidirectional
✦ <b>Packaging:</b>	100sqm/carton
✦ <b>Shelf life:</b>	10 years
✦ <b>Storage conditions:</b>	Store dry at -5°-40°
✦ <b>Length:</b>	100meter/roll
✦ <b>Width:</b>	1000mm
✦ <b>Density of dry fiber:</b>	1.8g/cm <sup>3</sup>
✦ <b>Area density:</b>	300g/m <sup>2</sup>
✦ <b>Net size:</b>	5mm*5mm

### TECHNICAL INFORMATION

✦ <b>Dry fiber tensile strength</b>	≥4900MPa
✦ <b>E-modulus:</b>	≥230GPa
✦ <b>Ultimate elongation</b>	2.3%
✦ <b>Maximum load compacity:</b>	796KN/m

### APPLICATION INSTRUCTIONS

1. Surface Preparing: Remove the coating of concrete surface with grinder. Polishing the Surface. If there is angular, grinder it into round, radius is around 25mm
2. Setting out: After setting out, cut the Wolfix carbon mesh based on request
3. Blending Motar: Blending the epoxy or polymer motar, mix it evenly.
4. Interface coating: Spraying related motar to the surface of structurer evenly, thickness should be around 5-10mm
5. Carbon mesh fixing: Stick the carbon fiber mesh into the lay out area, the gap is not allowed between the substrate and carbon mesh

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6. Impregnated coating: Coating the related mortar on the carbon fiber mesh, thickness around 15mm-30mm
7. Applying Impregnation Adhesive: Apply impregnation adhesive when primer adhesive is touch dry.
8. Maintenance: After the application, the maintain time not less than 72hours
9. Check Gap or Bubble: Check if any gap or bubble inside, if have need to repair it with additional mortar.

### FIRE PROTECTION

If necessary, WOLFIX WFC-N300 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.

### 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.