

# MAXICARB 300G

## CARBON FIBER STRUCTURAL STRENGTHENING SYSTEM

### Product Description

**MAXICARB 300G** is a high-strength uni-directional carbon fiber sheet for structural reinforcement, manual wraps lamination, and tensile strength reinforcement to structural members.

MAXICARB 300G is available in two grades and applied with **Sealbond Nuvoxibond Laminating Epoxy**, fiber laminating epoxy to form a part of **MAXICARB CARBON FIBER COMPOSITE STRENGTHENING SYSTEM**.

### Features

- Very strong and light weight fabric that can be wrapped around complex shapes and easy to install
- High strength to weight ratio
- Impact and blast resistant
- Non-corrosive reinforcement system
- Reduces crack width
- High toughness

### Application Areas

- Increased live load capacity in buildings and bridges, hospital floors, roofs of buildings, etc.
- Seismic retrofit of structural elements such as columns, unreinforced masonry walls, etc.
- Repair of large diameter pipes to achieve strengthening and water proof
- Repair of damaged structural components caused by aggressive environments, fire, vehicle impact, aging, etc.
- Changes in structural system: new openings in floors, removal of existing walls, etc.
- Correction of design or construction errors: misplaced reinforcing bars, insufficient structural depth

### Technical / Performance Data

Fiber Material	High Strength Carbon
Color	Black
Nominal thickness	0.167mm
Tensile strength	4,950 MPa
Tensile Modulus	252 GPa
Elongation at Break	2.0%
Density	1.82 g/cm <sup>3</sup>

### Laminated CFRP Properties

\*Single Layer laminated with Sealbond Nuvoxibond Clear C65, minimum of 21 samples/ test series according to ACI 440 testing in accordance with ASTM D-3039

PROPERTIES	Average Value	Design Value
Tensile Strength (MPa) ASTM D-3039	5,650	3,400
Tensile Modulus (GPa) ASTM D-3039	252	230
Elongation at break ASTM D-3039	2%	1.8%
Laminate thickness	0.167 mm	

### Procedure & Guidelines

#### DESIGN

Design should comply with the recognized design/specification entity and is typically based on CFRP contribution determined by detailed analysis. Design values will vary based on project requirements and applicable environmental and strength reduction factors.

#### SURFACE PREPARATION

All surfaces must be thoroughly cleaned to remove dirt, grease, mill scale, loose rust, chalk, and any other contaminants that can reduce adhesion. Use abrasive blasting, pressure wash, shotblast, grind, or other approved mechanical means to achieve an open-pore texture. In certain applications and at the engineer's discretion, the bond between the substrate and fabric may be determined to be non-critical (such as in column confinement applications). Smoothen the surfaces by

## MAXICARB 300G

mechanical grinding. All corners must be rounded up to 20mm diameter radius the surface must be clean and free from fins, sharp edges and protrusions.

### CUTTING

MAXICARB CARBON FIBER can be cut to appropriate length by using a commercial quality heavy-duty scissor.

### PRIMING

Prime the surfaces of the area to be bonded using Sealbond Nuvoxibond Laminating Epoxy. Surface should be dry with a maximum of free moisture content of 5%. Apply first coat of Sealbond Nuvoxibond Laminating Epoxy on the area as base coat/ sealer using roller or brush on detailing of edges.

### APPLICATION

Installation of MAXICARB CARBON FIBER strengthening system should be performed only by a specially trained, approved contractor. Note the specified number of plies, ply widths and fiber orientation.

Saturate the MAXICARB CARBON FIBER with Sealbond Nuvoxibond Laminating Epoxy both sides and apply it to the surface of the member by hand. Use an aluminum roller to remove all air pockets and ensure the intimate contact with the surface. Exerting a uniform tensile force that will distribute across the entire width of the MAXICARB CARBON FIBER will squeeze out all air bubbles or air pockets.

Apply Sealbond Nuvoxibond Laminating Epoxy to MAXICARB CARBON FIBER for final lamination. Let it be cure for 24 to 48 hours. The cured composite wrap shall have proper bond with the substrate and between the layers to ensure the uniform thickness and density with no porosity.

The finished composite wraps maybe painted over with acrylic paint, a two component urethane coating, any desired surface finish or protective fireproofing coating may be applied on the cured composite surface.

### CLEAN UP

Clean all tools and application equipment with solvent immediately after use.

### Health & Safety

In case of skin contact, wash thoroughly with soap and water. For eye contact, flush immediately with Sealbond Nuvoxibond Laminating Epoxy plenty of water; contact physician immediately.

### Storage / Packaging

MAXICARB 300g is available in rolls  
~100m x 0.5m  
~300 g/ m<sup>2</sup>  
~0.167 mm thick

This product must be stored in a cool, dark space, low humidity is recommended.

### Additional Information - Disclaimer

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All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the Product Data Sheet for the product awareness, copies of which will be supplied on request and is free of charge.



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