

ROCKMAX[®] CARBON HF 1.2

HIGH STRENGTH CARBON FIBER PLATE / STRIP SYSTEM



INTRODUCTION

Rockmax CARBON HF 1.2 is a high strength, high modulus carbon fiber reinforced polymer laminate system for strengthening structures.

STANDARD OF TESTING

ASTM D3039

ASTM D638

AREA OF USES

Rockmax CARBON HF 1.2 used to strengthening concrete structure for civil structure and building for the following issue below.

- Load increases
- Improve structural capacity
- Seismic strengthening
- Modification of structure
- Damaged structure
- Error in construction period
- Error in design
- Restore aging of old deteriorated

ADVANTAGES

- High strength.
- High elastic modulus.
- Lightweight system.
- Improved flexural strength.
- Corrosion resistance.
- Long services life time.
- Can apply in many shaped of concrete structures.
- Rapid installation.

TECHNICAL PROPERTIES

Properties of material

Properties	Performance	Test Method
Tensile Strength (MPa)	>3000	ASTM D3039
Tensile Modulus (GPa)	170	ASTM D3039
Fiber Density (g/cm ³)	1.6	-
Elongation at break (%)	1.7	-
Nominal Thickness (mm)	1.2	-
Roll Length (meter)	100	-
Roll Width (mm)	50 / 100	-

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INSTRUCTION

We recommend to install this material by trained and experienced contractor. The design of carbon fiber must be carried by qualified structural engineer with and comply to regulation of the locals.

PREPARATION

The concrete surfaces must be dry, smooth, clean and sound. Free from debris and loose materials. Make sure the concrete is fully cured, achieve the design strength and free from coating, plastering or any finishing. Remove all uneven surface by grinding machine. Clean the dust by blower or vacuum machine. All defects including cracks, holes, honey comb must be repaired prior to install carbon fiber system.

PRIMER

Once the concrete substrate is porous and not sound we recommend to apply **Rockmax Carbon EW** to the prepared substrate using brush or roller at approximate 0.20 - 0.30 kg per m² per coat. Make sure the surface is saturated with primer. If not apply the second coat. The primer will be dried at 2-4 hours depend on ambient temperature.

MAKE SMOOTH SURFACE

In case of the surface found many pinholes or air bubble. We recommend to smooth the surface using Epoxy putty to make it even surface. Apply epoxy putty (**Rockmax EB520**) by trowel and wait to dry.

INSTALLATION

Apply the first layer of **Rockmax Carbon EP** to the concrete substrate by trowel. The thickness of epoxy adhesive should be around 1-2 mm thickness (coverage rate at 2-4 kg/m²)

Install the Carbon fiber strip to the prepared surface and place firmly and using roller to make sure the fabric is saturated with resin. Wait the resin to dry up at 2-4 hours.

Full cure of the epoxy approximate 7 days.

PACKAGING

100 meter per roll.

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LIMITATION

Design calculations must be approved by licensed engineer accordance with local design standard.

STORAGE

Storage in cool and dry condition free from frost, water, moisture and high temperature. Avoid sunlight. Storage temperature between 5°C and 40°C degree.

SHELF LIFE

Unlimited shelf life.

CONTACT DETAIL

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IMPORTANT NOTE!!

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