

Description

- * It is a high strength, high modulus unidirectional carbon fiber reinforce polymer(CFRP) for structural strengthening and provide additional load bearing capacity
- * It is designed for strengthening concrete and masonry structures.
- * It is bonded onto the structure as external reinforcement using HP-57 epoxy resin as the adhesive.
- * This carbon fiber laminate strip is produced by pultrusion process.

Uses

- * This laminate strip should be used by the experienced applicator.

Characteristic & Advantages

- * High strength, High toughness, High modulus.
- * Soft and flexible, light self weight, easy to install.
- * Long shelf life and aging resistance.
- * High temperature resistance
- * Acid, Alkali & Salt resistance.
- * Seismic resistance
- * Environmental-friendly
- * Can be used for shear strengthening, confinement strengthening, flexural strengthening
- * The raw materials are for aviation grade.

Applications

► Load increases

- * Increased live loads in warehouses.
- * Increased traffic volumes on bridges.
- * Installation of heavy machinery in industrial buildings.
- * Vibrating structures.
- * Changes of building utilization.

► Seismic Reinforcement

- * Concrete column wrapping, beam strengthening, wall strengthening, slab strengthening.
- * Masonry walls reinforcement.

► Damage to Structural Parts

- * Aging of construction materials.
- * Stress reduction in steel reinforcement
- * Fire & Vehicle impact.

► Change of Structural System

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

► Design or Construction Defects

- * Lack of reinforcing bars.
- * Lack of member cross section.

► Improve Structural State

- Reduce the deformation.
- Reduce the stress of the original structure.
- The crack reinforcement.



Properties

UD Carbon Fiber Laminate 1.4T

Characteristics	Unit	Specification	Test Method
Tensile Strength	GPa(kgf/cm ²)	>3.0	ASTM D3039
Tensile Modulus	GPa(kgf/cm ²)	165	ASTM D3039
Density	g/cm ³	1.61	
Break Elongation	%	1.60	
Width	mm	50 or/and 100	
Thermal Resistance		>150°C	
Glass transition temperature		>100°C	
Packaging	Available in rolls, width 50mm or 100mm typically 100m length per 1 box		
Shelf life	36 months from the manufacturing date		
Storage condition	Avoid direct sunlight, in dry conditions at 4°C to 35°C		
Appearance	Black color laminate.		

► Basis of product data

The above data may differ based upon statistical variations depending upon mixing methods and temperature, equipment, application methods, test method, the construction site's conditions and curing conditions.

► Adhesive Agent

The amount of adhesive HP-57 used is 0.3kg ~ 1kg per meter.

But the consumption may increase or/and decrease depending on the field conditions.

Photos

