

RENEWWRAP®

Pre-Cured Carbon Fiber Laminates



STRUCTURAL STRENGTHENING

High-Strength Pre-Cured Carbon Fiber Laminates

RenewWrap pre-cured carbon fiber laminates are designed to be used in externally bonded applications. The composites are premanufactured to ensure high strength and high modulus.

TYPICAL USES

RenewWrap Laminates may be used to strengthen or retrofit a wide range of concrete and masonry structures. They are most commonly used on bridges, buildings and other structures. The laminates are used for strengthening existing structural members (concrete, wood, stone or masonry). Structures that are deficient due to either a structural flaw, deterioration, or because of a change in use, can often be brought to useful capacity using laminates.

Typical applications include:

- Negative moment strengthening of slabs and bridge decks
- Reinforcement for cantilevered bridge decks for railing and traffic barrier upgrades
- Transverse reinforcement in double tee parking decks
- Reinforcing around slab openings
- Shear and flexural upgrades of walls
- Warehouse and industrial floor slabs
- Bottom of structural members for positive moment flexural strengthening

MECHANICAL AND PHYSICAL PROPERTIES

PROPERTY ¹	ASTM METHOD	TYPICAL TEST VALUE	DESIGN VALUE
Ultimate Tensile Strength in Primary Fiber Direction	D3039	405,000 psi (2.79 GPa)	364,000 psi (2.51 GPa)
Elongation at Break	D3039	1.8%	1.67%
Tensile Modulus	D3039	22.5 x 106 psi (155 GPa)	20.25 x 106 psi (139 GPa)
Laminate Thickness RW-LMN-2-55 RW-LMN-4-55	D1777	.055 inches	

¹ Contact GeoTree engineers to confirm project specification values and design methodology.

BENEFITS

- Lightweight and easy to handle
- ASTM E84 Class 1 Rating
- High tensile strength, high modulus
- Uniform material properties
- Ease of installation
- Good high and low temperature properties
- No release agents in pre-cured laminates
- Ambient cure application

PACKAGING

- Available Thicknesses: 0.055" (1.4 mm) or 0.075" (1.9mm)
- Laminate Width: 4.0" (101.6 mm) or 2.0" (50.8 mm)
- Roll Length: 492 lineal ft. per roll (164sq. ft.) Typically ships in 40" x 40" x 6" boxes. Rolls are approximately 36" inside diameter.

STORAGE AND SHELF LIFE

- Store flat, in a cool, dry place at 40-95 °F (5-35 °C) away from flame or other hazards
- No shelf life if stored in unopened packaging
- Do not stack anything on top of Strand Sheets



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