SRS-600UNI

STRUCTURAL REINFORCEMENT SOLUTIONS

CARBON FIBER FABRIC

A unidirectional, high-strength, non-corrosive carbon fiber fabric designed to be field laminated with SRS-1000 Epoxy adhesive to create a carbon fiber-reinforced polymer (CFRP) composite for structural reinforcement and strengthening of concrete and masonry structural components.

TYPICAL FIBER PROPERTIES

Tensile Strength - 711 ksi 4900 MPa
Tensile Modulus - 33.4 Msi 230 GPa
Elongation - 2.10%
Density - .065 lbs/in^3 1.80 g/cm^3

APPLICATIONS

- External Reinforcement of Existing Structures
- Increasing Load Capacity
- Confinement
- Shear Strengthening
- Flexural Strengthening
- Construction Error Corrections
- Restoring Damaged/Deteriorated Structural Components
- Bowed Wall Stabilization
- Seismic Retrofit

ADAVANTAGES

- High Strength to Weight Ratio
- High Modulus of Elasticity
- Conforms to Structure
- Easy Installation
- Ambient Cure
- Arrests Structure Movement
- Low Aesthetic Impact
- Non-Corrosive
- Compatible with Most Finish Coatings

TECHNICAL DATA

CURED LAMINATE PROPERTIES WITH SRS-1000 EPOXY ADHESIVE

PROPERTY	AVE ULTIMATE	DESIGN VALUE
Tensile Strength	195,000 psi (1,352 MPa)	169,000 psi 1,169 Mpa
Tensile Modulus	12 Msi (86 GPa)	
Tensil % Enlongation	2 %	1%
Nominal Ply Thickness	0.039 in	
Tensile Strength per in (mm) Width	7,624 lbs/in (1.34 kN/mm)	6,709 lbs/in 1.18kN/mm
Tensile Strength per 6" Strap	45,744 lbs (203.68)kN	40,254 lbs (179.36kN)

The information provided on this product data sheet represents average values which have been obtained through certified testing performed in a third-party laboratory. As part of the quality assurance program at SRS, these values are verified regularly to ensure that the products being sold are represented accurately by the values on this sheet. There may be some variation in test results due to epoxy mixing methods, degree of saturation, sample preparation, and curing conditions. Per the recommendations in ACI-440.2, the ultimate tensile strengths provided represent the average test values minus three times the standard deviation which creates a 99.87% probability that the actual ultimate tensile properties will exceed the statistical based design values.

TYPICAL DATA

Storage Conditions - Store in Dry Area at 40 deg - 95 deg F (4-35 C)
Shelf Life Carbon - 10 years/Epoxy - 2 Years in Unopened Container
Color Carbon - Black/Epoxy - Semi Transparent Yellowish resin
Primary Fiber Direction - 0° Unidirectional
Areal Weight - 19.5 oz/SY 600 gsm

1-888-292-2592
www.structuralrs.com

Made in USA

SRS-600UNI

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ROLL KIT SIZES

Roll Size (Width x Length)
- SRS-600UNI 6" x 75 LF 37.5 SF - CARTRIDGE KIT
- SRS-600UNI 6" x 150 LF 75 SF - CARTRIDGE KIT
- SRS-600UNI 6" x 200 LF 100SF - BULK KIT

DESIGN

All applications containing SRS products must be designed by a registered design professional. The number of layers, dimensions, and detailing of SRS-600UNI shall be designed in accordance with ACI 440.2R or another recognized design guideline/code in order to meet the design performance specified for the application. Contact Structural Reinforcement Solutions for design and technical support.

SURFACE PREPERATION

Repair existing substrate per ICRI Guideline No. 310.1R. Concrete shall be abrasively prepared to achieve an open pore structure and CSP-3 in accordance with ICRI Guideline No. 310.2R by means of grinding, sand blasting, shot blasting, or pressure washing. Application surfaces shall be clean, sound, and free of standing water at time of application. All dust, laitance, grease, curing compounds, and other foreign materials that may hinder the bond must be removed before installation. In some applications, such as column confinement, the engineer may determine that the installation is not bond-critical, in which case abrasive surface preparation is not required. Existing concave and convex surfaces must be filled/transitioned using CSS-EP, thickened CSS-ES epoxy, or a suitable repair mortar. All corners to be wrapped around shall be rounded to a 1/2 in. (13 mm) minimum radius using a grinder, CSS-EP, or thickened CSS-ES epoxy.Structural Reinforcement Solutions for design and technical support.

APPLICATION

Structural Reinforcement Solutions Carbon Fiber Strengthening Systems should only be installed by professional contractors who have been trained in the application of externally bonded carbon fiber reinforcement. Once the surface preparation has been completed and when cartridge epoxy is being used, the mixing nozzles provided will sufficiently mix the 2:1 epoxy components. If bulk epoxy is being used, follow the epoxy mixing instructions to sufficiently mix the epoxy components prior to the application. Once the epoxy has been mixed, a thin layer should be applied to the surface in which the CFRP is to be bonded. This epoxy should be worked into the substrate to ensure penetration into the pores of the substrate. The carbon fiber should then be laid into the epoxy and worked in to ensure a full saturation of the fabric. To aid in achieving a full saturation of the carbon fiber straps, they can be pre-saturated with epoxy and laid into the same initial layer of epoxy layer as described previously. No matter which way the straps are initially installed, a final layer of epoxy should be applied to the strap and worked in to ensure full saturation. Refer to the full set of installation instructions at www.structuralrs.com to ensure that the appropriate procedures are followed.

LIMITED LIFETIME WARRANTY

This product is covered by the Structural Reinforcement Solutions LIMITED LIFETIME WARRANTY, which is available at structuralrs.com or by calling Structural Reinforcement Solutions at 1-888 292-2952.

FIRST AID

EYES: Wash fibers off skin with water and soap. If fibers are embedded in the skin, remove with tweezers. Discard clothing that may contain embedded fibers. Seek medical advice if exposure results in adverse effects.Eyes: Immediately flush with a continuous water stream for at least 20 minutes. Washing immediately after exposure is expected to be effective in preventing damage to the eyes. Seek medical advice.Inhalation: If there is inhalation exposure to the fibers of this product, remove source of exposure and move victim to fresh air. If victim is not breathing, give artificial respiration. If there is breathing difficulty, give oxygen. Seek medical advice for any respiratory problems.Ingestion: Ingestion is not a likely means of exposure for this product. If ingestion does occur, DO NOT INDUCE VOMITING. Nothing by mouth if unconscious. Seek medical advice.

CAUTION

Protective Measures: The use of safety glasses and chemically resistant gloves is recommended. Use appropriate clothing to minimize skin contact. The use of NIOSH-approved respirator is required to protect respiratory tract when ventilation is not adequate to limit exposure below the PEL. Refer to Safety Data Sheets (SDS) available at structuralrs.com/sds for detailed information.

Spill/Release and Cleanup Procedures: In case of spill, collect (e.g., sweep up, vacuum, etc.) spilled material and either reuse or dispose of properly. Wear personal protective equipment as described in the MSDS during cleanup activities.