

TECHNICAL DATA SHEET

Rhino Carbon Fiber 560 GSM Bidirectional | Revision Date 8/03/2023

8383 Riley Street,
Zeeland, MI USA 49464
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01

01: PRODUCT IDENTIFICATION

RHINO PRODUCTS USA 8383 Riley Street, Zeeland, MI 49464 USA	Product Code:	(Type-Width-Weight)	Weave Weight
		BD-5.5-560	1.03 lb/SY (560 g/m ²)
		BD-12-560	1.03 lb/SY (560 g/m ²)
		BD-24-560	1.03 lb/SY (560 g/m ²)

Product Name: Rhino Carbon Fiber 560 GSM Bidirectional

02: DESCRIPTION

Rhino Carbon Fiber 560 GSM Bidirectional is a high-strength, bidirectional carbon fiber fabric. Material is field laminated using RCF Saturant-Adhesive Epoxy to form a carbon fiber reinforced polymer (CFRP) system used to strengthen structural concrete elements.

03: WHERE TO USE

Load Increases	<ul style="list-style-type: none">• Increased loading capacity• Installation of heavy machinery in industrial buildings• Vibrating structures• Changes of building utilization• Meeting of changed standards or specifications
Seismic Strengthening	<ul style="list-style-type: none">• Column wrapping• Masonry walls
Damage to Structural Parts	<ul style="list-style-type: none">• Aging of construction material• Vehicle impact• Prevention of defects caused by earthquakes
Change in Structural System	<ul style="list-style-type: none">• Removal of walls or columns• Removal of slab sections for openings
Design or Construction Defects	<ul style="list-style-type: none">• Insufficient reinforcements• Insufficient structural depth

04: ADVANTAGES

- Flexible, can be wrapped around complex geometries
- High-strength
- Lightweight
- Fiber orientation tailor-made
- Non-corrosive
- Alkali resistant
- Low aesthetic impact

05: DATA

RESULTS MAY DIFFER BASED UPON STATISTICAL VARIATIONS DEPENDING UPON MIXING METHODS AND EQUIPMENT, TEMPERATURE, APPLICATION METHODS, TEST METHODS, ACTUAL SITE CONDITIONS AND CURING CONDITIONS.

Storage Conditions	Store dry at 40° - 95°F (4° - 35°C)
Shelf Life	Unlimited, if stored properly in original, unopened, undamaged packaging
Color	Black (red string)
Primary Fiber Direction	0° (Bidirectional) - Carbon
Areal Density / Weight	560 g/m ² (16.52 oz/yd ²)



1-888-684-3889 | www.RhinoCarbonFiber.com

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DRY FIBER PROPERTIES		
Property	Imperial	Metric
Thickness	-0.02205 in	-0.56 mm
Tensile Strength	≥493 ksi	≥3400 MPa
Tensile Modulus	≥33359 ksi	≥230 GPa
Elongation at Break %	1.6%	

TECHNICAL INFORMATION & COMPOSITE PROPERTIES					
Property	Tested/Experimental Average Value ¹		Design Value ²		Testing Method
	Imperial	Metric	Imperial	Metric	
Thickness	0.019 in	0.48 mm	0.019 in	0.48 mm	ASTM D3039
Tensile Strength	111 ksi	768 MPa	94 ksi	647 MPa	
Tensile Modulus	6890 ksi	47.5 GPa			
Elongation at Break %	1.6%	1.6%			
Tensile Strength per Unit Width	2259 lbs/in	0.396 kN/mm			

¹Load and Chord Stiffness per Unit are computed based on CFRP laminate specimen width
²20 sample coupons per test series

¹Average value of test series
²Average value minus 3 standard deviations per ACI440

6: SURFACE PREP

Refer to Rhino Carbon Fiber application instructions.

7: APPLICATION

Refer to Rhino Carbon Fiber application instructions.

8: TOOLING & FINISHING

Fabric can be cut to appropriate lengths by using sharp heavy duty shears. Dull or worn cutting implements can damage, weaken or fray the fabric and their use should be avoided.

9: LIMITATIONS & WARNINGS

- Design calculations must be made and certified by an independent licensed professional engineer
- System is a vapor barrier. Concrete should not be fully encapsulated in areas of freeze/thaw

10: WARRANTY

Rhino Products warrants to the Buyer that this product is in good quality and conforms to the manufacturer's specifications in force on the date of manufacturer and when used in accordance with the Installation Instructions and when stored as directed in the technical literature.

Manufacturer cannot warrant or guarantee any particular method of use, performance or application under any particular condition and Buyer is responsible for determining the suitability of intended purpose and assumes all risks therein. RCF shall not be liable for any injury, loss, cost of labor or consequential damages either directly, indirectly or incidentally, arising out of the use or misuse of any product sold by RCF or another distributor. If the product is proven to be in nonconformance, the Buyers sole remedy shall be a refund of the purchase price or replacement of product.



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