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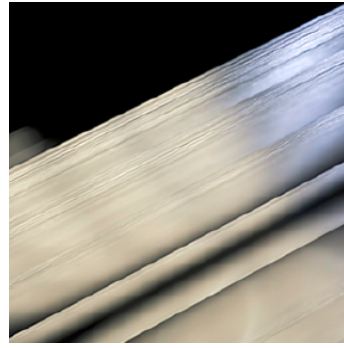
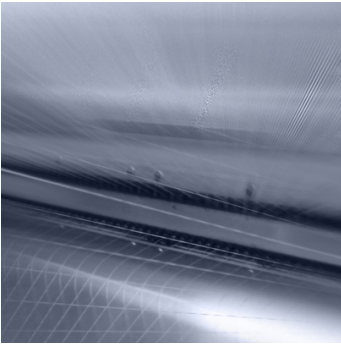


TECHNICAL INNOVATION / SAILCLOTH / CANVAS & INDUSTRIAL / HARDWARE / CONTACT

# Matrix

Advanced. Premium. Performance.

Challenge Sailcloth is excited to announce Matrix Weaves. Matrix is intended for performance oriented use for sailors who want shape holding ability combined with enhanced strength. The cloth provides great handling and excellent durability. Matrix is a completely unique construction that utilizes DoubleBeam<sup>2</sup> technology that has added extra strength that cannot be found in other light weight sailcloth styles.



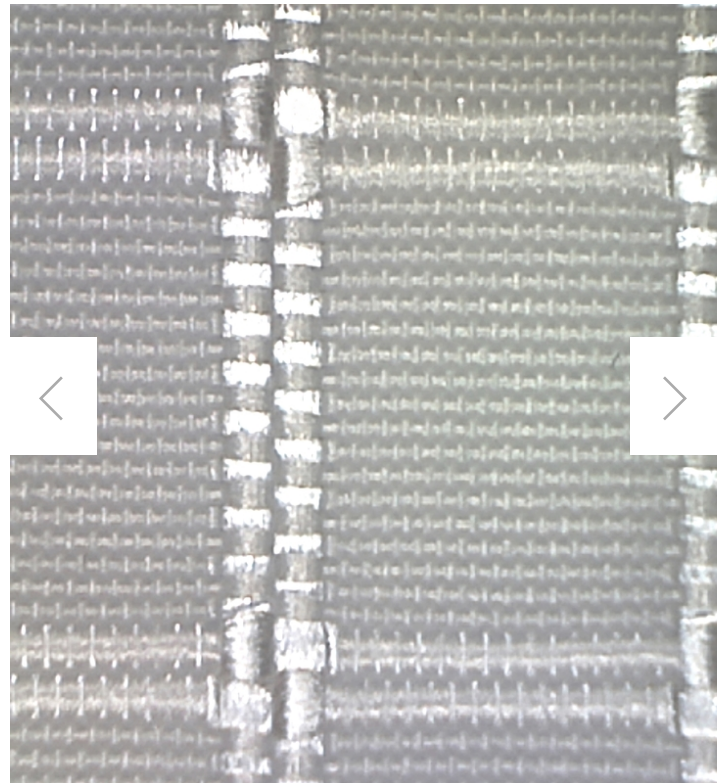
DoubleBeam<sup>2</sup> technology allows thick, 500 and 1000 denier yarns to be woven into light weight fabrics with Fiber104. The result is a fabric with outstanding strength-to-weight ratios, increased rugged durability, and multi-directional low stretch needed for shape longevity. The low stretch characteristics in all directions allow this fabric to be oriented in either a crosscut or tri-radial application, or one sail with both.

## DoubleBeam<sup>2</sup> Technology: How does it work?

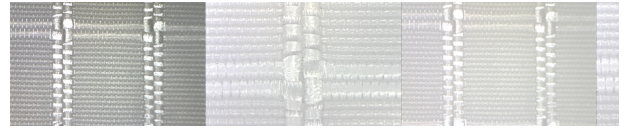
Matrix are light weight fabrics with DoubleBeam<sup>2</sup> support structures on four sides that are precisely calculated. The 500 denier or 1000 denier DoubleBeam<sup>2</sup> technology utilizes a proprietary loom that can interlocks super modulus fibers around the substrate weave, *in both directions, twice*. In addition, the Double Beam sits higher on the surface than the underlying fibers, which protect against rugged abrasion (as seen in the photo below). Performance sailors that demand the high quality fabrics of Challenge can now also have added DoubleBeam<sup>2</sup> support in their woven sails.

## Why the name Matrix?

This weave's namesake comes from the fact that the DoubleBeam<sup>2</sup> fibers interact with the substrate



Fiber104 like a Matrix. Look at the intersection of the large fibers in the pictures below. All of the DoubleBeam<sup>2</sup> fibers and the underlying Fiber104 substrate interact at every crossing.



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Designed by Sailor-Engineers. Powered by Challenge Sailcloth.

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