

# CHALLENGE AILCLOTH

## 7.88 High Mass Fiber Weaves

**1W70**  
Performance Fibers

High Mass Fiber Weaves are tight weave constructions of tough yarns for sails on boats that see a lot of use. Weight for weight HMF Weaves have a larger (warp) yarn on both surfaces. Such yarns will resist abrasion, tear, UV, and general use better than smaller fibers. Sailors who log many miles, and charter boat owners may prefer High Mass Fiber Weaves. The relatively balanced construction of this line provides excellent bias stability through the life of the cloth. Constructions are low aspect in light to medium weights and higher aspect in the heavier styles which experience highest loads. Heavier weight fills are Honeywell 1W70, one of the 2 best sailcloth yarns made. (Other is Fiber 104). We test all yarns using a proprietary MIT Phd. designed sailfiber test. High Mass Fiber Weaves are woven on the newest looms ensuring that weaving quality is second to none.



### Construction

- High Mass Fiber Weave is designed for durable cruising sails. The larger warp yarns provide better warp tear, abrasion and breaking (tensile) strength than most of the quality weaves available.
- The warp counts are much higher than fill counts, so the surface fibers are almost exclusively warp yarns, while the fill yarns are hidden: Warp yarns are almost exclusively exposed to the sun.
- Fiber mass is more effective in prolonging life in the sun than UV coatings which are often ineffective and can wear off.
- 7.88 has a high count of 400 x 500 denier yarns.



Style:	7.88 High Mass Fiber
Finish:	Stabilized / Nat
Width:	54"

Load (Lbs.) Required For...  
Higher Number Means Lower Stretch

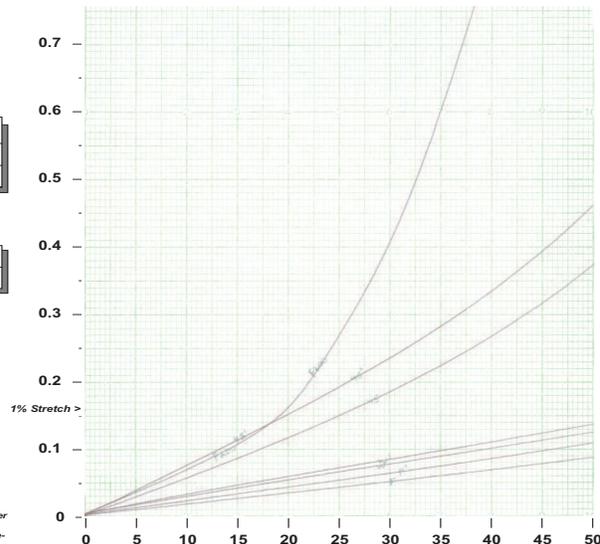
	Warp	Fill	Bias
1% Stretch	-	78	26.5

Stretch (Modulus) in 1/100" Units  
Lower Number Means Lower Stretch

	Warp	Fill	Bias
At 10 Pounds	3	1.5	5.5
10 Lb. Flutter	3	2	7.5
At 50 Pounds	12.5	8.5	37.5

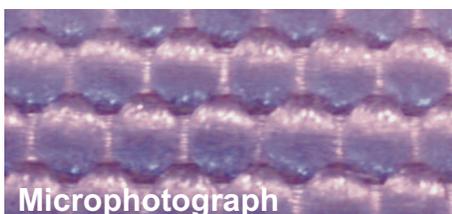
Weight:	7.98
Tears:	W: 8.5 F: 9.1

Please note: Our new pre-fatigued finish has better durability, and brought flutter curves down. As a result we have increased the severity of the procedure.



### Finish

- Available in Medium Firm spec of 1.5 - 5.5.
- The STABILIZED finish is achieved by immersing the fabric in a bath of suspended resin. The resin is absorbed by the fiber. The cloth is then fed into a long oven where the liquids are driven off, leaving resin solids bonded to fibers. The fabric is shrunk under high heat, further tightening the weave, and calendered at high tonnage to further stabilize the bias.



Microphotograph

### Applications

- Sails that need high resistance to tear, abrasion, UV, and high use.
- 7.88 is for mains and genoas on 32-36 foot boats, #1 genoas on boats up to 55 feet, #2's on boats up to 41 feet and #3's up to 36 feet.

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