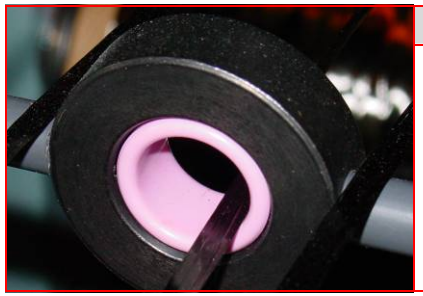
YARN PROPERTIES

SAILCLOTH FIBER	MODULUS Grams/denier	TENACITY Grams/denier	UV RESISTANCE Months to 50% strength loss	FLEX % in MIT flex test – 60 cycles	USES
Polyester	80-120	8	6 months	0%	Club racing & cruising sails
PEN	250	10	5 months	5%	One Design, club racing & cruising sails
Vectran® (LCP)	510	28	Requires UV protection	Affected little	Performance cruise
Technora® Black	540	27	5 months	9%	Race & Grand Prix
Aramid HM	940	25	3 months	27%	Race & Grand Prix
Dyneema® / Spectra®	1100	34	6-7 months	Not affected	Premium cruise
Carbon	1350-2200	20-40	Not affected	30% - 70%	Grand Prix Race



MODULUS	TENACITY	UV-RESISTANCE	FLEX LIFE
The yarns ability to resist stretch. The higher the number, the less a yarn will stretch.	The yarns initial breaking strength. The higher numbers indicates that it will take more load to break the fiber.	The amount of time it would take for a yarn to lose 50% of its initial tenacity. UV tests are normally conducted using artificial UV exposure. DIMENSION-POLYANT uses clear UV inhibitors in the lamination process to help prevent excessive UV degradation in our products.	A measure for a yarns ability to resist flex and folding. Lower numbers indicate less loss after flex cycles. A fibers performance in the Flex testing procedure can vary greatly depending on how the products are designed and laminated.

SAILCLOTH FIBER	PROS	CONS
Polyester	Very rugged yarn, UV stable, good flex, inexpensive and available in many denier sizes	Relatively stretchy, wicks some moisture
PEN	Less stretch than polyester, good flex and cost	Higher price than polyester, needs additional UV protection
Vectran® (LCP)	Good flex, less moisture gain, low creep	More expensive, requires UV protection
Technora® Black	Low stretch, high tenacity, good flex properties	Expensive and limited in denier sizes
Aramid HM	Low stretch, light weight, reasonable price	Less flex and UV resistance
Dyneema® / Spectra®	Low stretch, very durable, outstanding flex and breaking strength.	Expensive, yarn “creeps” under high loads, sensitive to lamination & heat.
Carbon	Very low stretch, light, good UV, and when combined with INSERT® technology has very good flex.	Flex can be poor, price depends on modulus, must use proper lamination techniques to make durable

sailcloth
technology