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# Sailcloth Definitions

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**AIRX:** Bainbridge's brand name for a new superior range of spinnaker nylons.

**ASPECT RATIO:** The luff length of a sail divided by foot length. High Aspect sails are tall and thin.

**BIAS:** A diagonal across a piece of fabric at 45° to the warp and fill.

**CARBON:** An extremely high modulus fibre used in Bainbridge DIAx-OS-HMC laminates.

**COUNT:** Number of yarns per inch in the warp or fill of a cloth.

**CREEP:** The property of fibres to gradually stretch under a constant load.

**CRIMP:** Length or waviness added to a yarn when it is woven over-and-under in a piece of fabric. Crimp can contribute to the elongation of a fabric under load.

**CROSS-CUT:** A panel layout where seams run across the sail, perpendicular to the leech.

**DACRON:** DuPont's trade name for polyester fibre.

**DENIER:** A system for coding filament yarns and fibres, with low numbers representing finer sizes and higher numbers representing heavier yarns.

**DIAx:** Bainbridge's brand name for racing laminates with a 45° diagonal scrim.

**ELONGATION:** The difference between the length of a stretched sample and its initial length; expressed in 1/100<sup>th</sup> of an inch.

**FIBRE:** Strand of material used to spin into a yarn.

**FILL:** The yarn or fibre running across the width of the fabric at right angles to the warp.

**FLEX-STRENGTH:** The ability of a fibre to resist strength loss having been flexed back and forth

**GSM:** Weight in grams of a square metre of cloth.

**HAND:** Softness or firmness of a fabric.

**KEVLAR:** DuPont's trade name for a family of high-strength aramid fibres.

**LAMINATE:** A layered fabric made by bonding scrim and/or taffetas to one or two plies of film.

**LSP:** Name for DIAx laminates using Pentex fibres.

**MIL:** 1/1000<sup>th</sup> of an inch (North America). For example, 5 mil monofilm is 0.005 inches thick.

**MODULUS:** The measure of stretch or elasticity of a fabric. High modulus = low stretch.

**PBO:** An extremely high modulus fibre by Toyobo. Used in Bainbridge DIAx-PBO Plus laminates.

**PENTEX:** Modified polyester with 250% less stretch.

**POLYESTER:** A strong, reliable and inexpensive fibre ideal for cruising and low-tech racing laminates, and woven sailcloth.

**PRIMARY YARN DIRECTION:** The orientation (warp or fill) in which a fabric is the most stretch resistant.

**RADIAL:** A panel layout where seams and panels radiate out from the corners of the sail.

**SAILMAKER'S YARD:** A 28.5" x 36" sample area that measures the weight of sailcloth. For example, 6.5 oz. sailcloth means that a 28.5" x 36" sample piece of that sailcloth would weigh 6.5 ounces.

**SCRIM:** Non woven, formed sheet of yarns held together with resin.

**SPECTRA:** A highly modified polyethylene fibre developed by Allied Corp and used in Bainbridge SCL-S laminates.

**TAFFETA:** A light woven fabric used on laminates to add durability and abrasion resistance.

**TENACITY:** The breaking strength of a yarn or fabric stated in force per unit of the cross-sectional area.

**TENSILE STRENGTH:** The ability of a fibre, yarn or fabric to resist breaking under tension.

**THREADLINE:** The direction of the yarns.

**TWARON:** Family of aramid fibres made by Akzo and used in Bainbridge DIAx-HMT racing laminates.

**VECTRAN:** LCP fibre made by Hoechst Celanese and used in Bainbridge CL-V laminates.

**WARP:** The yarn or fibre running the length of a fabric.

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