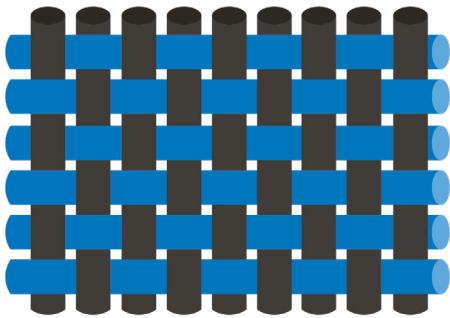


WOVEN CARBON FABRICS

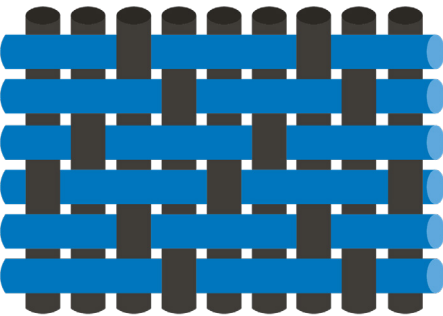
For applications where more than one fiber orientation is required, a fabric combining 0° and 90° fiber orientations is useful. Woven fabrics are produced by the interlacing of warp (0°) fibers and weft (90°) fibers in a regular pattern or weave style. The fabric's integrity is maintained by the mechanical interlocking of the fibers. Drapability (*the ability of a fabric to conform to a complex surface*), surface smoothness and stability of a fabric are controlled primarily by the weave style. Woven fabrics are commonly used as part of load-bearing structural components, they also possess excellent cosmetic features. Carbon fiber bi-directional fabric is suitable for various molding and infusion methods.

The following is a description of some of the more commonly found weave styles:



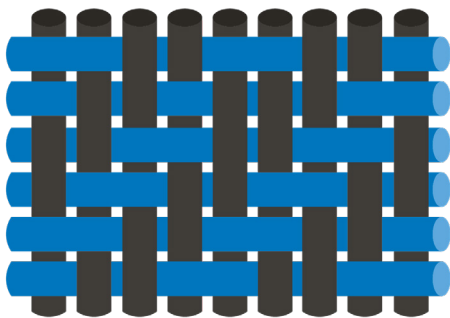
PLAIN WEAVE

Fibers are interlocked in an alternating pattern over and under each other. Plain weave fabrics have good stability and are ideally suited for flat panels and minimal contour radius.



SATIN WEAVE

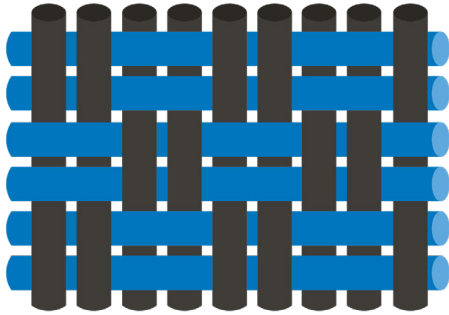
Satin weaves are typically available in four, five, or eight harness satin. The satin weaves do not intersect at every tow. Tows will float over several intersections and interlock under one. Satin weaves are easily draped to conform to difficult parts.



TWILL WEAVE

Twills are available in 2x2, 3x3, and 4x4 twill weaves. The diagonal rib, characterizes the weave. Each tow warp end floats over two or more picks. Twills are very pliable and have excellent drape while maintaining stability.





BASKET WEAVE

A variation of the plain weaves, the multiple warp ends fill tows of yarn and are woven together while being alternately interlocked over and under each other to make heavy fabrics.

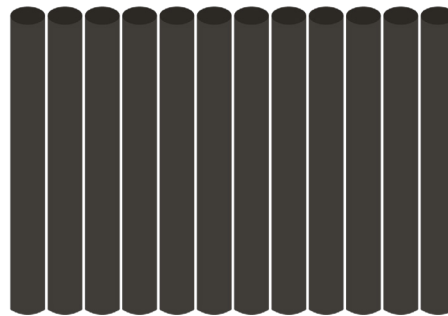
UNIDIRECTIONAL CARBON FABRICS

The unidirectional fabric consists of continuous fibers in the warp or 0° direction. Unidirectional fabrics offer the ability to place fiber in the component exactly where it is critical, and in the optimum quantity. Unidirectional fibers are straight and uncrimped resulting in the highest possible yield of properties from a fabric in composite component construction. Well suited for Alkali and chemical corrosion resistance of various building surfaces (*piers, foundation walls, bridges, tunnels*).

UNIDIRECTIONAL – HORIZONTAL WEAVE



UNIDIRECTIONAL – VERTICAL WEAVE



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