



U590 BARRFLEX™

BarrFlex™ U590t is an advanced para-aramid unidirectional material for softarmor ballistic applications. BarrFlex™ U590 consists of four plies of unidirectional product, cross-plyed in 0°/90°/0°/90° configuration. Our proprietary UD technology aligns the fibers in each layer in a parallel direction. Each layer is individually constructed within a resin matrix. Thermoplastic film is laminated to the top and bottom surfaces for abrasion resistance.

PHYSICAL PROPERTIES

Characteristic	Lower Limit	Target	Upper Limit
Width	62.99 in 160.0 cm	63.19 in 160.5 cm	63.39 in 161.0 cm
Conditioned Weight	6.69 oz/yd ² 227.0 g/m ²	7.02 oz/yd ² 238.0 g/m ²	7.34 oz/yd ² 249.0 g/m ²

FEATURES AND BENEFITS

- High protection levels against NIJ threats
- Excellent trauma management qualities
- Excellent option for low cost solutions

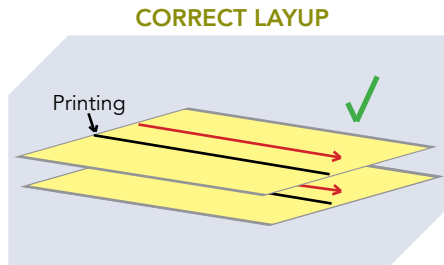
BALLISTIC PERFORMANCE

Test	Layers	Conditioned Areal Density kg/m ² *	Conditioned Areal Density lb/ft ² *	Average V50 m/s	Average V50 ft/s
9 mm FMJ V50C	16	3.81	0.78	≥ 455	≥ 1493

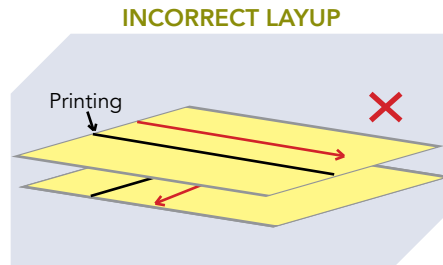
The ballistic data listed here is representative of typical results based on limited data and may be subject to revision.
*Listed values and target areal densities only.

Material performance is dependent on product orientation.
Always ensure the fiber orientation is correct.

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Same fiber direction should always face up.



UD with different fiber directions facing up is incorrect.

BarrFlex™ U590 has been tested in accordance with NIJ06 tumbling protocol. Additional accelerated aging tests were conducted on BarrFlex™ U590 using NIJ06 recommended conditions for the duration of six months. Please contact Barrday for additional information on both accelerated aging studies. This information does not relieve the user from the responsibility of testing the final ballistic construction.

Material Disclaimer:

In some instances, stitching may decrease ballistic performance when used in a monolithic configuration. If required, please contact Barrday for additional information on stitching.

Aramid Disclaimer:

Prolonged sunlight and UV exposure degrades aramid fibers. Aramid fibers will change color with exposure to sunlight or other UV sources. Do not store in direct light. Do not store near open flame, heat or strong oxidants. Aramid yarn absorbs up to 8% moisture by weight. Caution should be taken if aramid fibers are used at temperature above 149°C for extended periods of time.

Note:

The data presented herein has been developed under controlled manufacturing conditions. No warranty is expressed or implied regarding the accuracy or use of this data or the use of this product. It is the responsibility of the end user to determine suitability for use.