U531
BARRFLEX™

BarrFlex™ U531 is an advanced para-aramid unidirectional material for hard armor ballistic applications. Barrday BarrFlex™ U531 consists of four plies of unidirectional product, cross-plied 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.
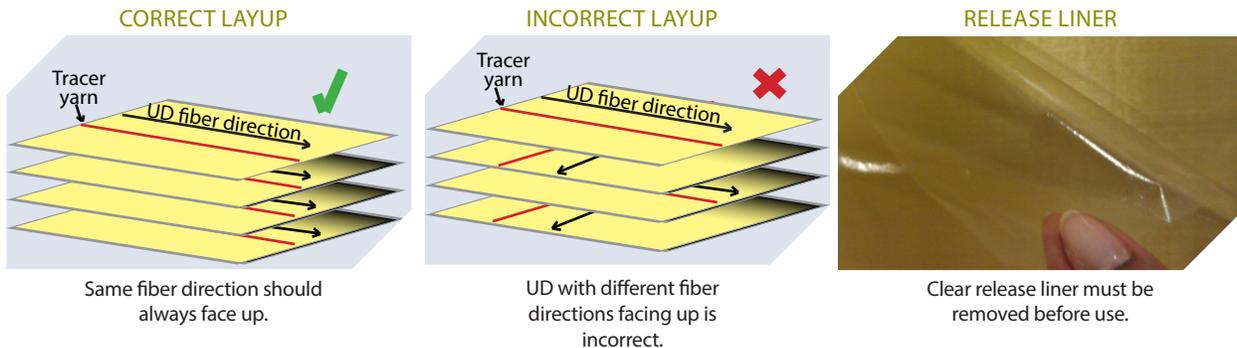
PRODUCT DATA

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	15.87 oz/yd^2 538.0 g/m^2	16.16 oz/yd^2 548.0 g/m^2	16.46 oz/yd^2 558.0 g/m^2

BALLISTIC PERFORMANCE

Test	Layers	Conditioned Areal Density (kg/m^2)	Dry Pressed Areal Density (lb/ft^2)	Typical V50 (m/s)	Typical V50 (ft/s)
Barrday 0.30 Cal FSP V50 at 4.0 psf	38	20.8	4	905	2968
17 grain V50 at 2.0 psf	19	10.4	2	739	2425

The ballistic data listed here is representative of typical results based on limited data and may be subject to revision.

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

CORRECT LAYUP

Tracer yarn — UD fiber direction ✔

Same fiber direction should always face up.

INCORRECT LAYUP

Tracer yarn — UD fiber direction ✖

UD with different fiber directions facing up is incorrect.

RELEASE LINER

Clear release liner must be removed before use.