

Kevlar® Reference Designs for Vests made with DuPont™ Kevlar®/Kevlar® XP™

Reference designs with DuPont™ Kevlar®/Kevlar® XP™

Reference Design	NIJ Level	Bullet Type	Areal Density kg/m ²	Typical V50 (m/s)	Typical BFD (mm)
10 layers Kevlar® XP™ S102 w/o stitch + 1 layer of foam (3 mm)	IIIA	.44 mag	5.10	513	35
10 layers Kevlar® XP™ S102 w/o stitch + 1 layer of foam	IIIA	9 mm	5.10	517	24
11 layers Kevlar® XP™ S102 w/tack stitch on 4 corners	IIIA	.44 mag	5.50	526	35
11 layers Kevlar® XP™ S102 w/tack stitch on 4 corners	IIIA	9 mm	5.50	524	22
[5 layers Kevlar® XP™ S102 + 7 layers 600d Kevlar® X300 (23 x 29 ends/inch) with 2" quilt stitches + 3 layers Kevlar® XP™ S102] w/tack stitch on 4 corners	IIIA	.44 mag	5.13	518	35
[5 layers Kevlar® XP™ S102 + 15 layers 600d Comfort XLT (23 x 23 ends/inch) with 2" quilt stitches + 2 layers Kevlar® XP™ S102] w/tack stitch on 4 corners only	IIIA	.44 mag	5.36	518	36
[6 layers Kevlar® XP™ S102 + (20 layers S4023G with 2" quilt stitches)] w/tack stitch on 4 corners only	IIIA	.44 mag	5.48	540	39
9 layers Kevlar® XP™ S102 + 1 layer foam	II	.357 mag	4.60	500	28
6 layers Kevlar® XP™ S102	IIA	40 S&W	3.00	406	30
19 layers 1000d Kevlar® 129 (22 x 22 ends/inch) + trauma pad	IIIA	9 mm	4.80	469	21
11 layers Kevlar® XP™ S300 + trauma pad	IIIA	9 mm	4.36	470	20
7 layers Kevlar® XP™ S300 + 9 layers 1000d Kevlar® 129 (22 x 22 ends/inch) + trauma pad	IIIA	9 mm	4.75	497	25

Notes: Basis wt. of Kevlar® XP™ S102 per layer is about 500 g/m²; basis wt. of foam per layer is about 100 g/m².

Basis wt. of Kevlar® XP™ S300 per layer is about 300 g/m²

All layers of Kevlar® XP™ S102 and S300 were arranged in the same direction/orientation for the above reference designs.

Disclosure on Ballistic Test Data and Reference Designs

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