

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

Reference designs with DuPont™ Kevlar® XP™

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

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

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

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