

Steels for civil applications

Threat				Safe 500		Mars® 550		Mars® 600		Mars® 650	
				Recommended minimum thickness for protection (mm)							
Standard & protection level		Munition	V proof * (m/s)	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)	Th	AD** (kg/sqm)
EN 1522	FB4	.44 Magnum FJ/FN/SC	440 ± 10	3.2*	25	-	-	-	-	-	-
	FB4+	7,62 x 39 FJ/PB/SC M43	720 ± 10	4,2	33	-	-	-	-	-	-
	FB6	7,62 x 51 Ball 5,56 x 45 SS109	830 ± 10 950 ± 10	6,5	51	5,7	46	5,0	39	-	-
	FB6 with Skin Effect ¹⁾	5,56 x 45 SS109	950 ± 10	8	63	-	-	-	-	-	-
	FB7	7,62 x 51 AP (P80)	820 ± 10	-	-	12,8	100	10,5	82	9,5	75
NIJ	Level IIIA	.44 Magnum SWC	426 ± 15	2.5*	-	-	-	-	-	-	-
	Level III	7,62 x 51 M80	838 ± 15	6,5	-	5,7	46	5	39	-	-
	Level IV	.30-06 (7,62 x 63) AP M2	868 ± 15	-	-	-	-	11,5	90	11	86
VPAM	PM6	7,62 x 39 FJ/PB/SC M43	720 ± 10	-	-	-	-	3,9	31	-	-
	PM6 + multi hit ²⁾	7,62 x 39 FJ/PB/SC M43	720 ± 10	4,2	33	3,9	31	-	-	-	-
	PM7	5,56 x 45 SS109	950 ± 10	-	-	5,7	46	5,0	39	-	-
		7,62 x 51 Ball	830 ± 10								
	PM7 + multi hit ²⁾	7,62 x 51 FMJ Nato Ball	830 ± 10	6,5	51	-	-	-	-	-	-
	PM7 + multi hit ²⁾ with Skin Effect ¹⁾	7,62 x 51 FMJ Nato Ball	830 ± 10	8	63	-	-	-	-	-	-
	PM8	7,62 x 39 API BZ	740 ± 10	-	-	-	-	8,5	67	7,5	59
	PM9	7,62 x 51 AP (P80)	820 ± 10	-	-	-	-	10,5	82	9,5	75
	PM10	7,62 x 54R API B32	860 ± 10	-	-	-	-	14	110	13	102

*For EN 1522 and VPAM PM 2006, velocity is recorded at maximum 2,5m from target strike face. For NIJ 0108.01, velocity is recorded at 2,5m from target strike face for levels II and IIIA and 12,5m for levels III and IV.

** AD : Areal Density

¹⁾ Skin Effect : the armor steel is tested with a 1mm midl-steel plate placed, in front of it, at a stand-off distance of 10mm

²⁾ Multi hit test condition : equilateral triangle with sides 4 ± 1 time projectile caliber

All angles of incidence are 0°.

All information in this document is for information purpose only. Final configuration must be tested on vehicle.

Looking for a specific multi-layer configuration of for protection against a threat that is not included in this table?
Please contact us for recommendation
Industeel reserves the right to change its product range at any time without prior notice.

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