INTERNATIONAL BALLISTIC STANDARDS FOR ARMOR

VPAM Armor Standard (Europe)	
Armor Level	**Protection**
PM 1	This armor would protect against three hits, fired from 10±0.5 meters, of:
.22 Long Rifle	2.6±0.1 g (40±1.54 gr) .22 Long Rifle lead round-nose bullets at a velocity of 360±10 m/s (1181±33 ft/s)
PM 2	This armor would protect against three hits, fired from 5±0.5 meters, of:
9×19mm Parabellum	8.0±0.1 g (123±1.54 gr) 9×19mm Parabellum DM41 FMJ round-nose lead-core bullets at a velocity of 360±10 m/s (1181±33 ft/s)
PM 3	This armor would protect against three hits, fired from 5±0.5 meters, of:
9×19mm Parabellum	8.0±0.1 g (123±1.54 gr) 9×19mm Parabellum DM41 FMJ round-nose lead-core bullets at a velocity of 415±10 m/s (1361±33 ft/s)
PM 4	This armor would protect against three hits, fired from 5±0.5 meters, of:
.357 Magnum	10.2±0.1 g (157±1.54 gr) .357 Magnum bullets at a velocity of 430±10 m/s (1410±33 ft/s)
.44 Magnum	15.6±0.1 g (240±1.54 gr) .44 Magnum bullets at a velocity of 440±10 m/s (1443±33 ft/s)
PM 5	This armor would protect against three hits, fired from 5±0.5 meters, of:
.357 Magnum	7.1±0.1 g (109±1.54 gr) .357 Magnum FMs (brass at nose) bullets at a velocity of 580±10 m/s (1902±33 ft/s)
PM 6	This armor would protect against three hits, fired from 10±0.5 meters, of:
7.62×39mm	8.0±0.1 g (122±1.54 gr) 7.62×39mm PS mild steel-core bullets at a velocity of 720±10 m/s (2362±33 ft/s)
PM 7	This armor would protect against three hits, fired from 10±0.5 meters, of:
5.56×45mm	4.0±0.1 g (62±1.54 gr) 5.56×45mm SS109/US: M855 FMJ bullets at a velocity of 950±10 m/s (3116±33 ft/s)
7.62×51mm	9.55±0.1 g (147±1.54 gr) 7.62×51mm DM111 steel-core bullets at a velocity of 830±10 m/s (2723±33 ft/s)
PM 8	This armor would protect against three hits, fired from 10±0.5 meters, of:
7.62×39mm	7.7±0.1 g (118±1.54 gr) 7.62×39mm BZ API (armor-piercing incendiary) bullets at a velocity of 740±10 m/s (2427±33 ft/s)
PM 9	This armor would protect against three hits, fired from 10±0.5 meters, of:
7.62×51mm	9.7±0.2 g (149±3.08 gr) 7.62×51mm P80 armor-piercing bullets at a velocity of 820±10 m/s (2690±33 ft/s)
PM 10	This armor would protect against three hits, fired from 10±0.5 meters, of:

7.62×54mmR	10.4±0.1 g (160±1.54 gr) 7.62×54mmR B32 API bullets at a velocity of 860±10 m/s (2821±33 ft/s)
PM 11	This armor would protect against three hits, fired from 10±0.5 meters, of:
7.62×51mm	8.4±0.1 g (129±1.54 gr) 7.62×51mm Nammo AP8/US M993 armor-piercing bullets at a velocity of 930±10 m/s (3051±33 ft/s)
PM 12	This armor would protect against three hits, fired from 10±0.5 meters, of:
7.62×51mm	12.7±0.1 g (196±1.54 gr) 7.62×51mm RUAG SWISS P AP armor-piercing bullets at a velocity of 810±10 m/s (2657±33 ft/s)
PM 13	This armor would protect against three hits, fired from an arbitrary distance, of:
12.7×99mm	43.5±0.1 g (671±7.71 gr) 12.7×99mm RUAG SWISS P penetrator bullets at a velocity of 930±10 m/s (3051±33 ft/s)
PM 14	This armor would protect against three hits, fired from an arbitrary distance, of:
14.5×114mm	63.4±0.1 g (978±7.71 gr) 14.5×114mm B32 API bullets at a velocity of 911±10 m/s (2988±33 ft/s)
TR Armor Standard (Germany)	
Armor Level	**Protection**
SK L	This test is based on VPAM PM 2, but it tests also for point-blank shots.
9×19mm Parabellum	This armor would protect against three hits, fired from 5±0.5 meters, as well as point-blank shots, of:
	8.0±0.1 g (123±1.54 gr) 9×19mm Parabellum DM41 FMJ round-nose lead-core bullets at a velocity of 360±10 m/s (1181±33 ft/s)
SK 1	This test is based on VPAM PM 3, but it adds two police special rounds, with the following modifications:
9×19mm Parabellum	This armor would protect against three hits, fired from 5±0.5 meters in an angle of 25°, as well as 3 shots at point-blank, of:
	8.0±0.1 g (123±1.54 gr) 9×19mm Parabellum DM41 FMJ round-nose lead-core bullets at a velocity of 415±10 m/s
	6.0±0.1 g 9×19mm Parabellum QD-PEP II/S police special round bullets at a velocity of 460±10 m/s
	6.1±0.1 g 9×19mm Parabellum Action 4 police special round bullets at a velocity of 460±10 m/s
SK 2 (PM 5)	This armor would protect against three hits, fired from 5±0.5 meters, of:
.357 Magnum	7.1±0.1 g (109±1.54 gr) .357 Magnum FMs (brass at nose) bullets at a velocity of 580±10 m/s (1902±33 ft/s)
SK 3 (PM 7)	This armor would protect against three hits, fired from 10±0.5 meters, of:

5.56×45mm	4.0±0.1 g (62±1.54 gr) 5.56×45mm SS109/US: M855 FMJ bullets at a velocity of 950±10 m/s (3116±33 ft/s)
7.62×51mm	9.55±0.1 g (147±1.54 gr) 7.62×51mm DM111 steel-core bullets at a velocity of 830±10 m/s (2723±33 ft/s)
SK 4 (PM 9)	This armor would protect against three hits, fired from 10±0.5 meters, of:
7.62×51mm	9.7±0.2 g (149±3.08 gr) 7.62×51mm P80 armor-piercing bullets at a velocity of 820±10 m/s (2690±33 ft/s)
HOSDB Armor Standard (United Kingdom)	
Armor Level	**Protection**
HG1/A	This armor would protect against six (three for S-sized panel) hits, fired from 5 meters, of:
	8.0±0.1 g (123±1.54 gr) 9×19mm Parabellum DM11 FMJ round-nose lead-core bullets at a velocity of 365±10 m/s
	10.2±0.1 g (158±1.54 gr) .357 Magnum R375M3 JSP bullets at a velocity of 390±10 m/s
HG1	This armor would protect against six (three for S-sized panel) hits, fired from 5 meters, of:
	8.0±0.1 g (123±1.54 gr) 9×19mm Parabellum DM11 FMJ round-nose lead-core bullets at a velocity of 365±10 m/s
	10.2±0.1 g (158±1.54 gr) .357 Magnum R375M3 JSP bullets at a velocity of 390±10 m/s
HG2	This armor would protect against six (three for S-sized panel) hits, fired from 5 meters, of:
	8.0±0.1 g (123±1.54 gr) 9×19mm Parabellum DM11 FMJ round-nose lead-core bullets at a velocity of 390±10 m/s
	10.2±0.1 g (158±1.54 gr) .357 Magnum R375M3 JSP bullets at a velocity of 430±10 m/s
HG3	This armor would protect against six (three for S-sized panel) hits, fired from 10 meters, of:
	4.0±0.1 g (62±1.54 gr) 5.56×45mm LE223T3 bullets at a velocity of 750±15 m/s (3116±33 ft/s)
RF1	This armor would protect against three hits, fired from 10 meters, of:
	9.3±0.1 g (144±1.54 gr) 7.62×51mm L2A2 FMJ bullets at a velocity of 830±15 m/s (2723±33 ft/s)
RF2	This armor would protect against three hits, fired from 10 meters, of:
	9.7±0.1 g (150±1.54 gr) 7.62×51mm L40A2 steel-core bullets at a velocity of 850±15 m/s (2723±33 ft/s)
SG3	This armor would protect against 1 hit, fired from 10 meters, of:
	28.4±0.1 g (437±1.54 gr) 12 gauge rifled lead slug at a velocity of 435±25 m/s
GOST Armor Standard (Russia)	
Armor Level	**Protection**

Class 1	This armor would protect against five hits, fired from 5 meters, of:
9×18mm Makarov	5.9 g (91 gr) 9×18mm Makarov 57-N-181S steel-core bullets at a velocity of 305–325 m/s (1000–1066 ft/s)
7.62×38mmR	6.8 g (105 gr) 7.62×38mmR 57-N-122 lead core bullets at a velocity of 275–295 m/s (902–968 ft/s).
Class 2	This armor would protect against five hits, fired from 5 meters, of:
5.45×18mm	2.5 g (38.6 gr) 5.45×18mm steel-core MPC 7N7 bullets at a velocity of 310–335 m/s (1017–1099 ft/s)
7.62×25mm Tokarev	5.5 g (84.8 gr) 7.62×25mm Tokarev steel-core bullets at a velocity of 415–445 m/s (1361–1460 ft/s)
Class 2A	This armor would protect against five hits, fired from 5 meters, of:
12 gauge	35 g (540 gr) 12 gauge lead-core "Hunter" shotshells at a velocity of 390–410 m/s (1279–1345 ft/s)
Class 3	This armor would protect against three hits, fired from 5.10 meters, of:
5.45×39mm	3.4 g (52 gr) 5.45×39mm 7N6 (PS) hardened steel-core bullets at a velocity of 890–910 m/s (2920–2985 ft/s)
7.62×39mm	7.9 g (122 gr) 7.62×39mm 57-N-231 (PS) hardened steel-core bullets at a velocity of 710–740 m/s (2329–2427 ft/s)
Class 4	This armor would protect against three hits, fired from 5.10 meters, of:
5.45×39mm	3.4 g (52 gr) 5.45×39mm 7N10 (PP) hardened steel-core bullets at a velocity of 890–910 m/s (2920–2985 ft/s)
Class 5	This armor would protect against three hits, fired from 5.10 meters, of:
7.62×54mmR	9.6 g (148 gr) 7.62×54mmR 57-N-323S steel-core bullets at a velocity of 820–840 m/s (2690–2756 ft/s)
7.62×39mm	7.9 g (122 gr) 7.62×39mm 57-N-231 (PS) hardened steel-core bullets at a velocity of 710–740 m/s (2329–2427 ft/s)
Class 5A	This armor would protect against three hits, fired from 5.10 meters, of:
7.62×39mm	7.4 g (114 gr) 7.62×39mm 57-BZ-231 (BZ API) armor-piercing incendiary bullets at a velocity of 720–750 m/s (2362–2460 ft/s).
Class 6	This armor would protect against three hits, fired from 5.10 meters, of:
7.62×54mmR	9.6 g (148 gr) 7.62×54mmR ST-M2 hardened steel-core bullets at a velocity of 820–840 m/s (2690–2756 ft/s)
Class 6A	This armor would protect against three hits, fired from 5.10 meters, of:
7.62×54mmR	10.4 g (160 gr) 7.62×54mmR 7-BZ-3 (B32 API) armor-piercing incendiary bullets at a velocity of 800–835 m/s (2624–2739 ft/s)
BR Levels (UK)	
Armor Level	**Protection**
BR1	This armor would protect against five hits, fired from 5±0.1, meters of:

9×18mm Makarov	5.9 g (91 gr) 9×18mm Makarov 57-N-181S steel-core bullets from a Stechkin APS at a velocity of 335±10 m/s (1199±33 ft/s)
BR2	This armor would protect against five hits, fired from 5±0.1 meters, of:
9×21mm Gyurza	7.93 g (122 gr) 9×21mm Gyurza 7N28 lead-core bullets from an SR-1 Vektor at a velocity of 390±10 m/s (1279±33 ft/s)
BR3	This armor would protect against five hits, fired from 5±0.1 meters, of:
9×19mm Parabellum	5.2 g (80 gr) 9×19mm Parabellum 7N21 hardened steel-core bullets from an MP-443 Grach at a velocity of 455±10 m/s (1492±33 ft/s)
BR4	This armor would protect against three hits, fired from 10±0.1 meters, of:
5.45×39mm	3.4 g (52 gr) 5.45×39mm 7N10 (PP) hardened steel-core bullets from an AK-74 at a velocity of 895±15 m/s (2936±49 ft/s)
7.62×39mm	7.9 g (122 gr) 7.62×39mm 57-N-231 (PS) hardened steel-core bullets from an AKM at a velocity of 720±15 m/s (2362±49 ft/s)
BR5	This armor would protect against three hits, fired from 10±0.1 meters, of:
7.62×54mmR	9.4 g (148 gr) 7.62×54mmR 7N13 (PP) hardened steel-core bullets from a SVD sniper rifle at a velocity of 830±15 m/s (2723±49 ft/s)
	7.9 g (122 gr) 7.62×54mmR 7BZ3 API (armor-piercing incendiary) bullets from a SVD sniper rifle at a velocity of 810±15 m/s (2657±49 ft/s)
BR6	This armor would protect against three hits, fired from 50±0.5 meters, of:
12.7×108mm	48.2 g (743.8 gr) 12.7×108mm 57-BZ-542 API (armor-piercing incendiary) bullets from an OSV-96 sniper rifle at a velocity of 830±20 m/s (2723±65 ft/s).

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Armor Level	Protection
B1	.22 lr, L/RN, mass 2.6 +/- 0.1g, 360 m/s (+/- 10), 3 shots
B2	9mm Luger, FMJ/RN/SC verzinnt, mass 8.0 +/- 0.1g, 400 m/s (+/- 10), 3 shots
B3	.357 Mag, FMJ/CB/SC, mass 10.2 +/- 0.1g, 430 m/s (+/- 10), 3 shots
B4	.44 Rem. Mag, FMJ/FN/SC, mass 15.6 +/- 0.1g, 440 m/s (+/- 10), 3 shots
B5	.223 Rem (5.56 x 45), FMJ/PB/SCP, mass 4.0 +/- 0.1g, 950 m/s (+/- 10), 3 shots
B6	.308 Win. (7.62x51), FMJ/PB/SC, mass 9.55 +/- 0.1g, 830 m/s (+/- 10), 3 shots
B7	.308 Win (7.62x51), FMJ/PB/HC, mass 9.45 +/- 0.1 Kern 4.6 Harte 60, 820 m/s (+/- 10), 3 shots

NIJ 0101.06 Armor Standard (United States)

Armor Level	Protection

Level I	This armor would protect against
.22 LR	2.6 g (40 gr) .22 Long Rifle Lead Round Nose (LR LRN) bullets at a velocity of 329 m/s (1080 ft/s ± 30 ft/s)
.380 ACP	6.2 g (95 gr) .380 ACP Full Metal Jacketed Round Nose (FMJ RN) bullets at a velocity of 322 m/s (1055 ft/s ± 30 ft/s).
	It is no longer part of the standard.
Level IIA	New armor protects against:
9×19mm	8 g (124 gr) 9×19mm Parabellum Full Metal Jacketed Round Nose (FMJ RN) bullets at a velocity of 373 m/s ± 9.1 m/s (1225 ft/s ± 30 ft/s)
.40 S&W	11.7 g (180 gr) .40 S&W Full Metal Jacketed (FMJ) bullets at a velocity of 352 m/s ± 9.1 m/s (1155 ft/s ± 30 ft/s)
.45 ACP	14.9 g (230 gr) .45 ACP Full Metal Jacketed (FMJ) bullets at a velocity of 275 m/s ± 9.1 m/s (900 ft/s ± 30 ft/s).
	Conditioned armor protects against
	8 g (124 gr) 9 mm FMJ RN bullets at a velocity of 355 m/s ± 9.1 m/s (1165 ft/s ± 30 ft/s)
	11.7 g (180 gr) .40 S&W FMJ bullets at a velocity of 325 m/s ± 9.1 m/s (1065 ft/s ± 30 ft/s)
	14.9 g (230 gr) .45 ACP Full Metal Jacketed (FMJ) bullets at a velocity of 259 m/s ± 9.1 m/s (850 ft/s ± 30 ft/s).
	It also provides protection against the threats mentioned in [Type I].
Level II	New armor protects against
9mm +P	8 g (124 gr) 9 mm FMJ RN bullets at a velocity of 398 m/s ± 9.1 m/s (1305 ft/s ± 30 ft/s)
.357 Magnum	10.2 g (158 gr) .357 Magnum Jacketed Soft Point bullets at a velocity of 436 m/s ± 9.1 m/s (1430 ft/s ± 30 ft/s).
	Conditioned armor protects against
	8 g (124 gr) 9 mm FMJ RN bullets at a velocity of 379 m/s ±9.1 m/s (1245 ft/s ± 30 ft/s)
	10.2 g (158 gr) .357 Magnum Jacketed Soft Point bullets at a velocity of 408 m/s ±9.1 m/s (1340 ft/s ± 30 ft/s).
	It also provides protection against the threats mentioned in [Types I and IIA].
Level IIIA	New armor protects against
.357 SIG	8.1 g (125 gr) .357 SIG FMJ Flat Nose (FN) bullets at a velocity of 448 m/s ± 9.1 m/s (1470 ft/s ± 30 ft/s)
.44 Magnum	15.6 g (240 gr) .44 Magnum Semi Jacketed Hollow Point (SJHP) bullets at a velocity of 436 m/s (1430 ft/s ± 30 ft/s).

	Conditioned armor protects against
	8.1 g (125 gr) .357 SIG FMJ Flat Nose (FN) bullets at a velocity of 430 m/s ± 9.1 m/s (1410 ft/s ± 30 ft/s)
	15.6 g (240 gr) .44 Magnum Semi Jacketed Hollow Point (SJHP) bullets at a velocity of 408 m/s ± 9.1 m/s (1340 ft/s ± 30 ft/s).
	It also provides protection against most handgun threats, as well as the threats mentioned in [Types I, IIA, and II].
Level III	Conditioned armor protects against
Rifles	9.6 g (148 gr) 7.62×51mm NATO M80 ball bullets at a velocity of 847 m/s ± 9.1 m/s (2780 ft/s ± 30 ft/s).
7.62×51mm NATO	It also provides protection against the threats mentioned in [Types I, IIA, II, and IIIA].
Level IV	Conditioned armor protects against
Armor Piercing Rifle	10.8 g (166 gr) .30-06 Springfield M2 armor-piercing (AP) bullets at a velocity of 878 m/s ± 9.1 m/s (2880 ft/s ± 30 ft/s).
	It also provides at least single hit protection against the threats mentioned in [Types I, IIA, II, IIIA, and III].
NIJ 0101.07 (United States)	
Armor Level	**Protection**
NIJ HG1	This armor would protect against:
9mm Luger	124 grain 9mm Luger Full Metal Jacketed Round Nose (FMJ RN) at a velocity of 1305 ft/s (398 m/s)
.357 Magnum	158 grain .357 Magnum Jacketed Soft Point (JSP) at a velocity of 1305 ft/s (436 m/s).
	This is roughly equivalent to the obsolete NIJ Level II ballistic protection level.[10]
NIJ HG2	This armor would protect against:
9mm Luger	124 grain 9mm Luger Full Metal Jacketed Round Nose (FMJ RN) at a velocity of 1470 ft/s (448 m/s)
.44 Magnum	240 grain .44 Magnum Jacketed Hollow Point (JHP) at a velocity of 1430 ft/s (436 m/s).
	This is roughly equivalent to the obsolete NIJ Level IIIA ballistic protection level.[10]
NIJ RF1	This armor would protect against:
7.62×51mm NATO	147 (±3) grain 7.62x51mm NATO M80 Ball Full Metal Jacketed (FMJ) Steel Jacket at a velocity of 2780 ft/s (847 m/s)
7.62×39mm	7.62x39mm Mild Steel Core (MSC) Ball Ammunition Type 56 from Factory 31 at a velocity of 2400 ft/s (732 m/s)
5.56×45mm NATO	56 (±2) grain 5.56x45mm NATO M193 at a velocity of 3250 ft/s (990 m/s).
	This is roughly equivalent to the obsolete NIJ Level III ballistic protection level.[10]

NIJ RF2	This armor would protect against:
7.62×51mm NATO	147 (±3) grain 7.62x51mm NATO M80 Ball Full Metal Jacketed (FMJ) Steel Jacket at a velocity of 2780 ft/s (847 m/s)
7.62×39mm	7.62x39mm Mild Steel Core (MSC) Ball Ammunition Type 56 from Factory 31 at a velocity of 2400 ft/s (732 m/s)
5.56×45mm NATO	56 (±2) grain 5.56x45mm NATO M193 at a velocity of 3250 ft/s (990 m/s).
	61.8 (±1.5) grain 5.56x45mm NATO M855 at a velocity of 3115 ft/s (950 m/s).
	This is identical to the ballistic protection provided by NIJ RF1, with the addition of 5.56x45mm M855. This level has no equivalent in obsolete NIJ Standard-0101.06.[10]
NIJ RF3	This armor would protect against:
.30-06 Springfield	165.7 (±7) grain .30-06 M2 Armor Piercing (AP) bullets at a velocity of 2880 ft/s (878 m/s).
	This is roughly equivalent to the obsolete NIJ Level IV ballistic protection level.[10]

NIJ 0108.01 Shield Standard	
Armor Level	**Protection**
Level I	.22 LRHV, mass 40g, 320 m/s +/- 12, 5 shots
	LRHW Lead .38 Special RN Lead, mass 158g, 850 m/s +/- 50, 5 shots
Level IIA	.357 Mag JSP, mass158g, 381 m/s +/- 15, 5 shots
	9mm FMJ, mass 124g, 358 m/s +/-12, 5 shots
Level II	.357 Mag JSP, mass 158g, 425 m/s +/- 15, 5 shots
	9mm FMJ, mass 124g, 358 m/s +/- 12, 5 shots
Level IIIA	.44 Mag, Lead SWC Gas Checked, mass 240g, 426 m/s +/- 15, 5 shots
	9mm FMJ, mass 124g, 426 m/s +/- 15, 5 shots
Level III	7.62mm, .308 Winchester FMJ, mass 150g, 838 m/s +/- 15, 5 shots
Level IV	30-06 APM2, mass 166g, 838 m/s +/- 15, 1 shot

US Military Armor Standards	
Armor Level	**Protection**
Soft Armor	US Army soft armor inserts adhere to standards specified under FQ/PD 07–05.[18] They are required to stop the following ballistic and fragmentation threats:
Fragmentation	2-grain (0.13 g) RCC (Right Circular Cylinder) at a velocity (V_{50}) of 2,710-foot-per-second (830 m/s) when dry and 2,575-foot-per-second (785 m/s) when wet.
9×19mm FMJ	4-grain (0.26 g) RCC at a velocity of 2,400-foot-per-second (730 m/s) (V_{50}) when dry and 2,300-foot-per-second (700 m/s) (V_{50}) when wet.

	16-grain (1.0 g) RCC at a velocity of 2,050-foot-per-second (620 m/s) (V_{50}) when dry and 1,920-foot-per-second (590 m/s) (V_{50}) when wet.
	64-grain (4.1 g) RCC at a velocity of 1,660-foot-per-second (510 m/s) (V_{50}) when dry and 1,610-foot-per-second (490 m/s) (V_{50}) when wet.
	16-grain (1.0 g) RCC at a velocity of 2,000-foot-per-second (610 m/s) (V_{50}) after hot and cold temperature exposure and accelerated aging.
	16-grain (1.0 g) RCC at a velocity of 1,900-foot-per-second (580 m/s) (V50) after contamination with motor oil and JP-8.
	17-grain (1.1 g) Fragment Simulating Projectile (FSP) at a velocity of 1,850-foot-per-second (560 m/s) (V_{50}) when dry.
	124-grain (8.0 g) 9×19mm Remington FMJ at a velocity of 1,400-foot-per-second (430 m/s)+50-foot-per-second (15 m/s) (V0) and 1,525-foot-per-second (465 m/s) (V50).
SAPI	SAPI plates were the first ballistic plates to see mass issue in the US military. They have a black fabric cover with white text. These plates adhere to CO/PD 00-03[19] and are rated to stop the following threats:
7.62×51mm	3 shots of 147-grain (9.5 g) 7.62×51mm M80 ball bullets at a velocity of 2,750-foot-per-second (840 m/s)+50-foot-per-second (15 m/s) (V0).
7.62×54mmR	3 shots of 147-grain (9.5 g) 7.62×54mmR LPS steel-core FMJ bullets at a velocity of 2,300-foot-per-second (700 m/s)+50-foot-per-second (15 m/s) (V0).
5.56×45mm	3 shots of 62-grain (4.0 g) 5.56×45mm M855 bullets at a velocity of 3,250-foot-per-second (990 m/s)+50-foot-per-second (15 m/s) (V0).
ISAPI	ISAPI (Improved SAPI) plates were designed as an upgrade to SAPI in the face of API threats in Iraq. They were superseded by ESAPI plates before they could be widely issued. These plates are rated to stop the following threats:[20]
7.62×51mm	3 shots of 147-grain (9.5 g) 7.62×51mm M80 ball bullets at a velocity of 2,750-foot-per-second (840 m/s)+50-foot-per-second (15 m/s) (V0).
7.62×54mmR	3 shots of 147-grain (9.5 g) 7.62×54mmR LPS steel-core FMJ bullets at a velocity of 2,300-foot-per-second (700 m/s)+50-foot-per-second (15 m/s) (V0).
5.56×45mm	3 shots of 62-grain (4.0 g) 5.56×45mm M855 bullets at a velocity of 3,250-foot-per-second (990 m/s)+50-foot-per-second (15 m/s) (V0).
7.62×39mm API	3 shots of 114-grain (7.4 g) 7.62×39mm 57-BZ-231 (BZ API) armor-piercing incendiary bullets at a velocity of 2,400-foot-per-second (730 m/s)+50-foot-per-second (15 m/s) (V0).

ESAPI (Revs. A-E)	ESAPI plates were developed in response to increased threats posed by 7.62×54mmR AP threats in Iraq and Afghanistan. They have a green fabric cover with white text. Original ESAPI plates, as well as those from Revisions B through D have the text "7.62mm APM2 Protection" on the back; Rev. E plates have the text "ESAPI - REV. E". The early-model plates are rated to stop the following threats:[21]
7.62×51mm	3 shots of 147-grain (9.5 g) 7.62×51mm M80 ball bullets at a velocity of 2,750-foot-per-second (840 m/s)+50-foot-per-second (15 m/s) (V0).
7.62×54mmR	3 shots of 147-grain (9.5 g) 7.62×54mmR LPS steel-core FMJ bullets at a velocity of 2,750-foot-per-second (840 m/s)+50-foot-per-second (15 m/s) (V0).
5.56×45mm	3 shots of 62-grain (4.0 g) 5.56×45mm M855 bullets at a velocity of 3,250-foot-per-second (990 m/s)+50-foot-per-second (15 m/s) (V0).
.30-06 Springfield AP	2 shots of 166-grain (10.8 g) .30-06 M2 AP armor-piercing bullets at a velocity of 2,850-foot-per-second (870 m/s)+50-foot-per-second (15 m/s) (V0).
ESAPI (Rev. G)	With the issuance of CO/PD 04-19H[22] on 4 March 2013, the ESAPI protection standards improved significantly. These plates are indicated by the text "ESAPI - REV. G" on the back and are rated to stop the following threats:
7.62×51mm	3 shots of 147-grain (9.5 g) 7.62×51mm M80 ball bullets at a velocity of 2,750-foot-per-second (840 m/s)+50-foot-per-second (15 m/s) (V0) and 2,850-foot-per-second (870 m/s) (V50 - combined).
7.62×54mmR	3 shots of 147-grain (9.5 g) 7.62×54mmR LPS steel-core FMJ bullets at a velocity of 2,750-foot-per-second (840 m/s)+50-foot-per-second (15 m/s) (V0) and 2,850-foot-per-second (870 m/s) (V50 - combined).
5.56×45mm	3 shots of 62-grain (4.0 g) 5.56×45mm M855 bullets at a velocity of 3,250-foot-per-second (990 m/s)+50-foot-per-second (15 m/s) (V0) and 3,350-foot-per-second (1,020 m/s) (V50 - combined).
.30-06 Springfield AP	3 shots of 166-grain (10.8 g) .30-06 M2 AP armor-piercing bullets at a velocity of 2,850-foot-per-second (870 m/s)+50-foot-per-second (15 m/s) (V0).
7.62×54mmR Sniper	3 shots of 151-grain (9.8 g) 7.62×54mmR 7N1 "Sniper" steel-core bullets at a velocity of 2,700-foot-per-second (820 m/s)+50-foot-per-second (15 m/s) (V0).
5.56×45mm AP	3 shots of 55-grain (3.6 g) 5.56×45mm M995 AP bullets at a velocity of 3,350-foot-per-second (1,020 m/s)+50-foot-per-second (15 m/s) (V0).

ESAPI (Rev. J)	With the issuance of CO/PD 04-19REV J[23] on 1 October 2018, the ESAPI protection standards were changed again. The protection requirements from 7.62×51mm NATO M80 ball and 5.56×45mm M855 were removed, and a high first-shot V50 requirement was added for the .30-06 M2 AP projectile. These plates are indicated by the text "ESAPI - REV. J" on the back and are rated to stop the following threats:
7.62×54mmR	3 shots of 147-grain (9.5 g) 7.62×54mmR LPS steel-core FMJ bullets at a velocity of 2,750-foot-per-second (840 m/s)+50-foot-per-second (15 m/s) (V0) and 2,850-foot-per-second (870 m/s) (V50 - combined).
.30-06 Springfield AP	3 shots of 166-grain (10.8 g) .30-06 M2 AP armor-piercing bullets at a velocity of 2,850-foot-per-second (870 m/s)+50-foot-per-second (15 m/s) (V0) and 3,000-foot-per-second (910 m/s) (V50 - first shot only).
7.62×54mmR Sniper	3 shots of 151-grain (9.8 g) 7.62×54mmR 7N1 "Sniper" steel-core bullets at a velocity of 2,700-foot-per-second (820 m/s)+50-foot-per-second (15 m/s) (V0).
5.56×45mm AP	3 shots of 55-grain (3.6 g) 5.56×45mm M995 AP bullets at a velocity of 3,350-foot-per-second (1,020 m/s)+50-foot-per-second (15 m/s) (V0).
XSAPI	XSAPI plates were developed in response to a perceived threat of AP projectiles in Iraq and Afghanistan. Over 120,000 inserts were procured;[24] however, the AP threats they were meant to stop never materialized, and the plates were put into storage. XSAPI plates have a tan fabric cover with black text. Early plates have the text "7.62 mm AP/WC Protection"[25] inscribed on the back; on newer variants, this text instead reads "XSAPI - REV. B" or "XSAPI - REV. C". These plates adhere to FQ/PD 07-03 and are rated to stop between three and six shots at velocities between 2,750-foot-per-second (840 m/s) and 3,350-foot-per-second (1,020 m/s) (V_0) depending on threat type.
7.62×51mm	
7.62×54mmR	
7.62×39mm API	
.30-06 Springfield AP	
7.62×54mmR Sniper	
7.62×51mm AP	
5.56×45mm AP	

GA141 armor standard (China)	
Armor Level	**Protection**
GA 1	Copper-jacketed bullet of 4.87 g (0.172 oz) mass at 320±10 m/s, as shot from a type 64 or type 77 pistol.
7.62×17mm	
GA 2	Copper-jacketed bullet of 5.6 g (0.20 oz) mass at 445±10 m/s, as shot from a type 54 pistol.
7.62×25mm Tokarev (Pistol)	
GA 3	Same bullet as above, but with a velocity of 515±10 m/s, as shot from a type 79 submachine gun.
7.62×25mm Tokarev (SMG)	
GA 4	Steel-cored bullet of 5.68 g (0.200 oz) mass at 515±10 m/s, as shot from a type 79 submachine gun.
7.62×25mm Tokarev AP (SMG)	

GA 5	Steel-core bullet, 8.05 g (0.284 oz) mass at 725±10 m/s, as shot from a type 56 or type 81 assault rifle.
7.62×39mm	
GA 6	Steel-core bullet, 9.6 g (0.34 oz) mass at 830±10 m/s, as shot from a type 79 or type 85 sniper rifle.
7.62×54mmR	

BIS Armor Standard (India)	
Armor Level	**Protection**
1	9x19mm bullet weight 7.4 - 8.2g, FMJ/Pb, 430 m/s (+/- 15), distance of impact 5m (+/- 0.5)
2	7.62x39mm Bullet Weight 7.45 - 8.05g, FMJ/MSC, 710 m/s(+/- 15), Distance of Impact 10m (+/- 0.5)
3	7.62x51mm Bullet Weight 9.4 - 9.6g, FMJ/Pb, 840 m/s (+/- 15), Distance of Impact 10m (+/- 0.5)
4	5.56x45mm Bullet Weight 3.5 - 4.0g, FMJ/(SI+Pb), 890 m/s (+/- 15), Distance of Impact 10m (+/- 0.5)
5	7.62x39mm Bullet Weight 7.45 - 8.05g, HSC, 700 m/s (+/- 15), Distance of Impact 10m (+/- 0.5)
6	7.62x54R Bullet Weight 10.3 - 10.5g, API, 80 m/s (+/- 15), Distance of Impact 10m (+/- 0.5)
Special	Any Other requirement by the user.

UL 752	
Armor Level	**Protection**
Level 1	9mm FMJ, mass 124g, velocity 1175 FPS, 3 shots
Level 2	.357 Mag JSP, mass 158g, velocity 1250 FPS, 3 shots
Level 3	.44 Mag SWC, mass 240g, velocity 1350 FPS, 3 shots
Level 4	.30-06 SP, mass 180g, velocity 2540 FPS, 1 shot
Level 5	7.62mm Copper Jacket FMJ M80 Ball .308 caliber, mass 150g, velocity 2750 FPS, 1 shot
Level 6	9mm FMJ Sub Machine gun, mass 124g, velocti1400 FPS, 5 shots
Level 7	5.56mm FMJ (.223 Caliber), mass 55g, velocity 3080 FPS, 5 shots
Level 8	7.62mm Copper Jacket FMJ M80 Ball .308 caliber, AR-10, mass 150g, velocity 2750 FPS, 1 shot

STANAG 4569	
Armor Level	**Protection**
	7.62 x 51mm NATO M80 Ball, 833 m/s, mass 147g
	5.56 x 45 NATO SS109, 900 m/s, mass 190g
Level 1	5.56 x 45 M193, 937 m/s, mass 182g
Level 2	7.62 x 39 API BZ, 695 m/s, mass 123g
	7.62 x 51 AP (WC Core), 930 m/s, mass 168g
Level 3	7.62 x 54R B32 API (Dragunov), 854 m/s, mass 148g

Level 4	14.5 x 114 AP B32, 911 m/s, mass 655g
Level 5	25mm APDS-TM-791 or TLB 073, 1258 m/s, mass 134 grams

STANAG 2920	
Armor Level	**Protection**
Caliber .22 Type 1	Rockwell 30+/-1, 1.1grams +/-0.03
Caliber .22 Type 2	Rockwell 27 +/-3, 1.1grams +/-0.03
Caliber .30	Rockwell 30 +/-1, 2.84grams +/-0.03
Caliber .50	Rockwell 30+/-1, 13.39grams +/- 0.13
20mm	Rockwell 30+/-1, 52.73grams +/-0.26
2g RCC	Outside Dia 0.111 +/- .001 inches, 0.111 inches length,Rockwell 29 +/-2
4g RCC	Outside Dia 0.134 +/-.001 inches, 0.147 inches length,Rockwell 29 +/-2
16g RCC	Outside Dia 0.219 +/-.001 inches, 0.221 inches length,Rockwell 29 +/-2
64g RCC	Outside Dia 0.344 +/-.001 inches, 0.355 inches length,Rockwell 29 +/-2