

PROTECTA

PROTEÇÃO A TODA PROVA

TABELAS BALÍSTICAS

NIJ STANDARD 0101.04, USA

Armor Type	Test- Bullet	Bullet- Producer	Bullet-Weight [g][gr.]	Bullet-Velocity [m/s] [ft/s]	Distance [m]	Max. BFD [mm]	Angle Test [°Nato]	Wet test yes/no	Padding down yes/no	No. of shots per panel	No. of tests
I	22 caliber LR LRN	Not spec.	2,6 40	329 ± 9 1080 ± 30	5	44	0° 4x 30° 2x	yes only	Yes	6	4
	.380 ACP FMJ RN	Not spec.	6,2 95	322 ± 9 1055 ± 30	5	44	0° 4x 30° 2x	yes only	Yes	6	4
II-A	9mm FMJ RN	Not spec.	8,0 124	341 ± 9 1120 ± 30	5	44	0° 4x 30° 2x	yes only	Yes	6	4
	40 S&W FMJ RN	Not spec.	10,2 158	322 ± 9 1055 ± 30	5	44	0° 4x 30° 2x	yes only	Yes	6	4
II	9mm FMJ RN	Not spec.	8,0 124	367 ± 9 1205 ± 30	5	44	0° 4x 30° 2x	yes only	Yes	6	4
	.357 Mag. JSP	Not spec.	10,2 158	436 ± 9 1430 ± 30	5	44	0° 4x 30° 2x	yes only	Yes	6	4
III-A	9mm FMJ RN	Not spec.	8,0 124	436 ± 9 1430 ± 30	5	44	0° 4x 30° 2x	yes only	Yes	6	4
	.44 Mag. JHP	Not spec.	15,6 240	436 ± 9 1430 ± 30	5	44	0°	yes only	Yes	6	4
III	7,62mm Nato FMJ	Not spec.	9,6 148	847 ± 9 2780 ± 30	15	44	0°	yes only		6	2
	.30 caliber M2 AP	Not spec.	10,8 166	878 ± 9 2880 ± 30	15	44		yes only		1	2

Particularities:

- Backing material: Roma No. 1. 19mm ± 2mm (1,03kg sphere from 2m height).
- Wet test: 3 min spraying from each side expect the V50 panels.
- Temperature test: No
- Measurement back face deformation: Shot No. 1 + shot No. 2 or 3 (higher velocity fair hit).
- V50 requirements: Level I, II-A, II and III-A additional 2 panels V50 using 9mm
- Min distance from the edges: 76mm

NIJ STANDARD 0108.01

Armor Type	Test Ammunition	Projectile Weight [g]	Projectile Velocity [m/s]	Shot Distance [m]	Projectile Bore Diameter [mm]	Projectile Shape	Test Specimen Size [mm]	Test Specimen Material	Test Specimen Thickness [mm]	Test Specimen Density [g/cm³]	Test Specimen Yield Strength [MPa]	Test Specimen Tensile Strength [MPa]	Test Specimen Elongation [%]	Test Specimen Impact Resistance [J/m²]
I-A	22 LR LRN	4,0	329 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
	.380 ACP FMJ RN	6,2	322 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
II-A	9mm FMJ RN	8,0	341 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
	40 S&W FMJ RN	10,2	322 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
II	9mm FMJ RN	8,0	367 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
	.357 Mag. JSP	10,2	436 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
III-A	9mm FMJ RN	8,0	436 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
	.44 Mag. JHP	15,6	436 ± 9	5	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
III	7,62mm Nato FMJ	9,6	847 ± 9	15	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10
	.30 caliber M2 AP	10,8	878 ± 9	15	4,2	Round	12,7	Aluminum	1,5	2,7	100	100	10	10

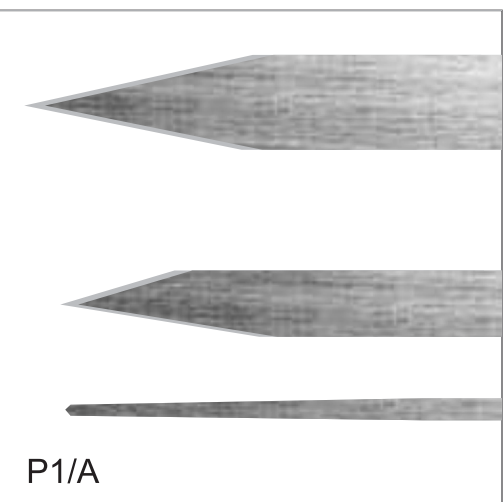
Particularities:
* These tests must be specified by the user. All of the tests must be specified.
* Impact of bullet 5,0m (16,4ft) from a position 10° or the edge of the test specimen.
* Qualify the test specimen at a temperature of 23 ± 5°C (73 ± 9°F) at least 24 hours before.

NIJ STANDARD 0115.00, USA

Test method:	Drop test double punch (drop weight 1000g)
Backing material:	Composition of layers of foam and rubber
Blade:	Engineered test blades PSDB/P1/A and PSDB/S1/G
Spike:	Engineered test spike
Shot Energies:	

	Blade:	Spike:
Level 1	E1 = 24J E2 = 36J	E1 = 24J E2 = 36J
Level 2	E1 = 30J E2 = 50J	E1 = 30J E2 = 50J
Level 3	E1 = 43J E2 = 65J	E1 = 43J E2 = 65J

No. of attacks: 4x E1 at 0°; 4x E2 at 0°; 4x E1 at 45°
with each blade a side or the spike
7mm for E1 and 20mm for E2
Backstop: ground length; witness paper
51mm from the edges and any previous attack
Backstop: only and blade = spike protection permitted
Max. penetration into backing:
Measurement of penetration:
Min distances:
Particularities:



NIJ STANDARD 0101.06, USA

Armor Type	Test-Bullet	Bullet-Producer	Bullet-Weight [g] [gr.]	Bullet-Velocity [m/s] [ft/s]	Distance [m]	Max. BFD [mm]	Angle Test [° Nato]	Padding down yes/no	No. of shots per panel	No. of tests and conditioning	
				New	Conditioned					New	Conditioned
II-A	9 mm FMJ RN	Remington	8.0 12.4	373 ± 9 1225 ± 30	5	44	0° 4x 30/45° each 1x	yes	6	8 wet	4 dry
	.40 S&W FMJ	Remington	11.7 180	352 ± 9 1155 ± 30	5	44	0° 4x 30/45° each 1x	yes	6	8 wet	4 dry
II	9 mm FMJ RN	Remington	8.0 124	398 ± 9 1305 ± 30	5	44	0° 4x 30/45° each 1x	yes	6	8 wet	4 dry
	.357 Mag. JSP	Remington	10.2 158	436 ± 9 1430 ± 30	5	44	0° 4x 30/45° each 1x	yes	6	8 wet	4 dry
III-A	.357 SIG FMU FN	Speer	8.1 125	448 ± 9 1470 ± 30	5	44	0° 4x 30/45° each 1x	yes	6	8 wet	4 dry
	.44 Mag. JHP	Speer	15.6 240	436 ± 9 1430 ± 30	5	44	0° 4x 30/45° each 1x	yes	6	8 wet	4 dry
III	7.62 mm Nato FMJ	not spec.	9.6 148	352 ± 9 1155 ± 30	5	44	0°	-	6	-	4 wet 924 shots)
IV	.30 caliber M2 AP	not spec.	10.8 166	* 878 ± 9 2880 ± 30	15	44	0°	-	1-6	-	4-24 sweet (24 shots)

Particularities:

- Backing material: Roma No. 1, 19 mm ± 2mm, all indiv. values>16<22 mm (1.03 kg sphere from 2m height)
- Weat test: 30 min. vertical immersion, 10 min dripping of the unaged pannel
- Temperature test: No
- Measurement BFD: Shot No. 1, 2 and 3<44mm, if not estimated probability of BFD>44 mm has to be < 20%; also measured for aged pannels, but no fail criteria if > 44mm
- Min distance from the edges: Lighter bullet min. not greater than 51 mm (2"), heavier bullet min. not greater than 76 mm (3")
- Min distance from previous shots: 51 mm

Particularities level II-A, II and III-A:

- Panel sizes: S di sizes apci ed. Manufacturer has to choose range of sizes. Smallest and Largest size have to be tested 50/50% for perforation and BFD test
- Conditioning: Tumbling for 10 d at 65°C (149 °F) and 80% RHL with 5 ± 1 rpm (72.000 ± 1500 rotations)
- V50 requirements: New: 120 shots (10 panels) each caliber largest size. No penetr. below max. ref. speed. (V0.5 new Vref. new)
- Conditioned: 24 shots (2panels) for each caliber largest size. No penetration below max. ref. speed
- Shoot pattern: Shots 4,5 and 6 have to be within a 100mm (3.94") circle

Particularities level III and IV:

- Conditioning: 10 d at 65° (149°F) and 80% RHL + 24h between -15°C and + 90°C + 2 drops
- V50 requirements: level III Conditioned: 24 shots (4 plates): No penetration below max. ref. speed
- level IV Conditioned: 12 shots (2-12 plates). No penetration below max. ref. speed

SOLUÇÕES EM MULT-TECNOLOGIAS

Flexibilidade

V50 > 550m/s

Multi-hit

menor peso por M²

Eficientes contra disparos à queima roupa

Soluções: AR; PE e fibras mistas

Resistência a perfurocortantes

Resistência à fragmentos

BFS < 30mm para 44 Mag (IIIA)

Eficiente nos tiros de borda

Placas balísticas Stand alone

Mais conforto / Gerenciamento Térmico



Ostensivo

Desenvolvidos para entregar ao usuário conforto e flexibilidade para o melhor desempenho no dia-a-dia. Fabricados com os tecidos mais tecnológicos aliados à resistência e performance.



Táticos

Padrão M.O.L.L.E. com opções de sistema de soltura rápida desenvolvidos em duas opções de uso: conjugado com colete flexível IIIA e possibilidade de uso de placas stand alone nas capas Plate Carrier. fabricados com tecidos de alta resistência aliados ao melhor gerenciamento térmico.



Dissimulados

Os coletes dissimulados foram pensados para trazer ao seu guarda roupa uma peça com assinatura PROTECTA para uso discreto onde o conforto, flexibilidade e liberdade de movimentos são as principais características do produto. Tecidos com acabamentos finos e de discreto uso para qualquer situação.



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