BARRIER PENETRATION QUICK REFERENCE

Every value computed at the muzzle (0 m) with an FMJ projectile. Model output, not measured test data.

ROUND	Drywall 12.7 mm	Softwood 19 mm pine	Plate glass 4 mm	Sheet steel 1.5 mm	Hardwood 25 mm oak	Red brick 100 mm	Concrete 100 mm	Ballistic gel 300 mm
.22 LR 40gr 330 m/s 2.59 g	**FULL** 319 m/s	**FULL** 291 m/s	**FULL** 243 m/s	**FULL** 272 m/s	**FULL** 243 m/s	**STOPPED** no exit	**STOPPED** no exit	**FULL** 171 m/s
9mm 124gr 360 m/s 8.00 g	**FULL** 350 m/s	**FULL** 330 m/s	**FULL** 293 m/s	**FULL** 314 m/s	**FULL** 295 m/s	**STOPPED** no exit	**STOPPED** no exit	**FULL** 210 m/s
.45 ACP 230gr 260 m/s 14.90 g	**FULL** 253 m/s	**FULL** 228 m/s	**FULL** 190 m/s	**STOPPED*** no exit	**FULL** 187 m/s	**STOPPED** no exit	**STOPPED** no exit	**FULL** 175 m/s
5.7x28 40gr 716 m/s 2.60 g	**FULL** 695 m/s	**FULL** 655 m/s	**FULL** 633 m/s	**FULL** 652 m/s	**FULL** 600 m/s	**FULL** 175 m/s	**DEEP** no exit	**FULL** 143 m/s
5.56 M193 55gr 940 m/s 3.56 g	**FULL** 918 m/s	**FULL** 856 m/s	**FULL** 870 m/s	**FULL** 884 m/s	**FULL** 787 m/s	**FULL** 396 m/s	**FULL** 446 m/s	**FULL** 172 m/s
7.62x39 123gr 715 m/s 7.97 g	**FULL** 700 m/s	**FULL** 675 m/s	**FULL** 662 m/s	**FULL** 674 m/s	**FULL** 640 m/s	**FULL** 369 m/s	**FULL** 292 m/s	**FULL** 274 m/s
.308 M80 147gr 840 m/s 9.53 g	**FULL** 825 m/s	**FULL** 793 m/s	**FULL** 792 m/s	**FULL** 802 m/s	**FULL** 754 m/s	**FULL** 489 m/s	**FULL** 497 m/s	**FULL** 314 m/s
.300 WM 190gr 900 m/s 12.30 g	**FULL** 886 m/s	**FULL** 856 m/s	**FULL** 861 m/s	**FULL** 868 m/s	**FULL** 821 m/s	**FULL** 589 m/s	**FULL** 625 m/s	**FULL** 388 m/s

READING IT **FULL** through - the number is what leaves **MARGINAL** nominal stops, weak material does not **STOPPED** stays in

What was computed

Round	Muzzle velocity	Mass	Bullet diameter	Type
.22 LR 40gr	330 m/s	2.59 g	5.70 mm	FMJ
9mm 124gr	360 m/s	8.00 g	9.00 mm	FMJ
.45 ACP 230gr	260 m/s	14.90 g	11.43 mm	FMJ
5.7x28 40gr	716 m/s	2.60 g	5.70 mm	FMJ
5.56 M193 55gr	940 m/s	3.56 g	5.70 mm	FMJ
7.62x39 123gr	715 m/s	7.97 g	7.92 mm	FMJ
.308 M80 147gr	840 m/s	9.53 g	7.82 mm	FMJ
.300 WM 190gr	900 m/s	12.30 g	7.82 mm	FMJ

Materials, as the engine has them

Barrier	Thickness	Compressive strength	Variance
Drywall	12.7 mm	3 MPa	+/- 15%
Softwood	19 mm pine	50 MPa	+/- 20%
Plate glass	4 mm	400 MPa	+/- 10%
Sheet steel	1.5 mm	250 MPa	+/- 5%
Hardwood	25 mm oak	85 MPa	+/- 18%
Red brick	100 mm	60 MPa	+/- 15%
Concrete	100 mm	120 MPa	+/- 12%
Ballistic gel	300 mm	4 MPa	+/- 8%

Verdicts are the calculator's own: each cell is run three times, at the material's nominal compressive strength and at plus and minus its variance, and MARGINAL means the nominal run stops while the weak one does not. * marks a cell whose penetration depth came back as exactly 1.000 mm - the floor calcPen applies to eroded penetration, not a computed depth. Treat those as marginal rather than as a result. Ballistic gel is a soft-tissue proxy and a 300 mm block is thinner than several of these rounds penetrate, so FULL there means overpenetration, not defeat of a barrier. Every figure is model output from the same engine that runs the calculator and is not a substitute for a test against the thing in front of you.

Run your own