



Testing of Security Glazing for Bullet Resistance

DIN 52 290

level	weapon	bullet type	bullet mass		striking velocity		# of strikes	strike spacing		firing range		Tickness BRG
			grams	grains	m/sec	ft/sec		mm	in	meters	feet	
			C1-SF/SA	9mm x 19	FMJ,RN,SP	8	123,5	355 / 365	1165 / 1197	3 X 3	125 / 135	
C1-SF/SA	,357 magnum	FMJ,CN,SP	10,25	158,2	415 / 425	1362 / 1394	3 X 3	125 / 135	4,92 / 5,31	3	9,8	16
C1-SF/SA	,44 magnum	FMJ,FN,SP	15,55	240	435 / 445	1427 / 1460	3 X 3	125 / 135	4,92 / 5,31	3	9,8	21
C1-SF/SA	7,62 x 51 mm	FMJ,PN,SP	9,45	145,8	785 / 795	2575 / 2608	3 X 3	125 / 135	4,92 / 5,31	10	32,8	40
C1-SF/SA	7,62 x 51 mm	FMJ,PN,SP	9,75	150,5	800 / 810	2625 / 2657	3 X 3	125 / 145	4,92 / 5,71	25	82	64

testing	witness plate	screen	screen	3 samples	equilateral	sample
	50 mm behind	spacing	placement	of size	triangle	conditioning
	2in behind	1m	2,5m from	495/505 mm	center of	21/25 deg C
		accuracy	barrel	19,5/19,8 in	glass	70/77 deg F
		10us				12 hrs.
FMJ	full metal jacket					
RN	round nose					
CN	conical nose					
FN	flat nose	SF = no penetration and	no splinters			
SP	soft point	SA = no penetration and	splinters			
HP	hard point					

advantagees of APGBT standars

compatibility with APGBT standars

- 1) primary ammunition types
- 2) same number of test samples for qualification
- 3) number of hits and hit spacing
- 4) test conditions/set up similar

- 1) APGBT includes 4 common types of sovietic ammunition (soviet weapons/ammunitions are communly used in terrorist activities and random street crime)
- 2) APGBT stipulations multiple ammunitions for select levels (example: FAV standard, AP)
[this stipulation puts a higher bunder on APGBT]
[creates a higher level of sefety for our costumers]
[you **can not** assume 1 bullet is more lethal than another]
- 3) APGBT includes SS 109 and M 193 protection
- 4) APGBT specifies number of test samples for qualification (3)

(they do not call out the number of test samples for qual)

