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## ASTM F 1233 - BALLISTIC CRITERIA

Class / Level	Weapon Description	Caliber	Bullet Mass <sup>A</sup> / Type <sup>B</sup>	Velocity <sup>C</sup> , ft/s (m/s)	Minimum No. of Impacts <sup>D</sup>
HG1	Handgun - Low	.38 Special	158 gr (10.2 g), lead	850-900 (259-274)	3
HG2	Handgun - Soft Point	.357 Magnum	158 gr (10.2 g), JSP	1350-1450 (381-411)	3
HG3	Handgun - Medium, Jacketed	9 mm	124 gr (8.0 g), FMC	1200-1300 (365-396)	3
HG4	Handgun - High	.44 Magnum	240 gr (15.6 g), LGC	1400-1450 (427-442)	3
SMG	Submachine-gun	9 mm	124 gr (8.0 g), FMC	1400-1500 (426-457)	3
R1	Rifle - Light	.223 (5.56 mm)	55 gr (3.6 g), M193 Ball, FMC	3200-3300 (975-1006)	3
R2	Rifle - Heavy, Soft Point	.30-'06	180 gr (11.7 g), SP	2850-3000 (867-914)	3
R3	Rifle - Heavy, Jacketed	.308 Winchester (7.62 mm)	147 gr (9.5 g), M80 Ball, FMC	2700-2800 (823-853)	3
R4-AP	Rifle - Armor Piercing	.30-'06	164 gr (10.6 g), M2-AP	2750-2850 (838-867)	1
SH1 <sup>E</sup>	Shotgun - Buckshot	12 gauge 3 in. Magnum	00 buckshot, 15 pellets	1150-1250 (350-381)	1 <sup>F</sup>
SH2	Shotgun - Slug	12 gauge	1 oz. (437.5 gr, 28.3 g) rifled slug	1600-1700 (487-518)	3

<sup>A</sup> gr denotes grain as a unit mass: 1 gr = 1.439 x 10<sup>-4</sup> lb (0.0647981 g)

<sup>B</sup> FMC = Full Metal Casing, JSP = Jacketed Soft Point, LGC = Lead Gas-Check, and SP = Soft Point

<sup>C</sup> Velocity measured at a distance of 10 ft (3 m) from the strike face of the sample. Muzzle of the barrel is at a distance of 25 ft (7.6 m) from the strike face of the sample.

<sup>D</sup> Minimum number of shots required on glazed features plus additional shots to examine other features of the assembly. Prior to testing the intended impact location(s) shall be marked in the approximate center of the target area. Where 3 impacts are specified, they are to be located at the corners of a 5 in. (127 mm) equilateral triangle. The minimum spacing between locations is 4 in. (102 mm).

<sup>E</sup> This ammunition is to be used as an adjunct to the primary test to further evaluate the ability of designed assembly details to resist fragmentary threats.

<sup>F</sup> The shot pattern of the pellets shall be such that they all impact within an 8 in. (203 mm) diameter circle at a distance of 25 ft (7.62 m) from the muzzle of the weapon.