

**EN Standard - European Standard EN 1063: 1999 Security Glazing Ballistic Standard**

Armor Type	Projectile Calibre	Cartridge Type	Velocity Range	No. Shots	Shot Spacing	No. Samples	Test Temp
BR1	.22 LR	40 grain Lead Round Nose	1048 to 1214 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F
BR2	9mm Luger	124 grain Full Steel Jacket Round Nose Soft Core	1280 to 1345 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F
BR3	.357 Magnum	158 grain Full Steel Jacket Conned Soft Core	1378 to 1444 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F
BR4	.44 Magnum	240 grain Full Copper Jacket Flat Nose Soft Core	1411 to 1476 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F
BR5	5.56 x 45 NATO (.223 Remington)	62 grain type SS109 (Steel Penetrator)	3084 to 3150 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F
BR6	7.62 x 51 NATO (.308 Winchester)	147 grain Full Steel Jacket (M80)	2690 to 2756 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F
BR7	7.62 x 51 NATO (.308 Winchester)	150 grain Full Copper Jacket Steel Hard Core	2657 to 2723 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F
SG1	12 Gauge	478 grain Solid Lead Brenneke Slug (1.09 ounce)	1312 to 1444 ft/sec	1	n/a	3	55 - 73F
SG2	12 Gauge	478 grain Solid Lead Brenneke Slug	1312 to 1444 ft/sec	3	4.3 to 5.1in Triangle	3	55 - 73F

**Standard - Rating:**

Number of samples required:	3 samples
Projectile Caliber :	22 LR
Cartridge Type:	40 grain Lead Round Nose
Velocity Range:	1048 to 1214 ft/sec.
Number of Shots:	3 shot(s)
Shot Spacing:	4.3 to 5.1 in. triangle
Velocity Measurement Distance:	8.2 ft from Target
Target Range:	32.8 ft.
Sample Size:	19.69 x 19.69 in.
Witness Plate:	0.0008 in. Aluminum foil
Witness Plate Distance:	19.69 in.
Spall Catch Box:	17.32 x 17.32 in.
Test Temperature:	55 -73 °F
Standard Document:	European Standard EN 1063:1999 Security Glazing
Source:	ISSN 0335-3931; ICS: 81.040.20
Comments:	NF EN 1063 August 2000
Note:	A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**Standard - Rating:**

Number of samples required:	3 samples
Projectile Caliber :	9mm Luger
Cartridge Type:	124 grain Full Steel Jacket Round Nose Soft Core
Velocity Range:	1280 to 1345 ft/sec.
Number of Shots:	3 shot(s)
Shot Spacing:	4.3 to 5.1 in. triangle
Velocity Measurement Distance:	8.2 ft from Target
Target Range:	16.4 ft.
Sample Size:	19.69 x 19.69 in.
Witness Plate:	0.0008 in. Aluminum foil
Witness Plate Distance:	19.69 in.
Spall Catch Box:	17.32 x 17.32 in.
Test Temperature:	55 -73 °F
Standard Document:	European Standard EN 1063:1999 Security Glazing
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Note: A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**BR2 - 9 mm Parabellum****Standard - Rating:**

Number of samples required:	3 samples
Projectile Caliber :	.357 Magnum
Cartridge Type:	158 grain Full Steel Jacket Coned Soft Core
Velocity Range:	1378 to 1444 ft/sec.
Number of Shots:	3 shot(s)
Shot Spacing:	4.3 to 5.1 in. triangle
Velocity Measurement Distance:	8.2 ft from Target
Target Range:	16.4 ft.
Sample Size:	19.69 x 19.69 in.
Witness Plate:	0.0008 in. Aluminum foil
Witness Plate Distance:	19.69 in.
Spall Catch Box:	17.32 x 17.32 in.
Test Temperature:	55 -73 °F
Standard Document:	European Standard EN 1063:1999 Security Glazing
Source:	ISSN 0335-3931; ICS: 81.040.20
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Note: A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**BR3 - .357 Magnum**

**Standard - Rating:** **BR4 - .44 Magnum**  
Number of samples required: 3 samples  
Projectile Caliber : .44 Magnum  
Cartridge Type: 240 grain Full Copper Jacket Flat Nose Soft Core  
Velocity Range: 1411 to 1476 ft/sec.  
Number of Shots: 3 shot(s)  
Shot Spacing: 4.3 to 5.1 in. triangle  
Velocity Measurement Distance: 8.2 ft from Target  
Target Range: 16.4 ft.  
Sample Size: 19.69 x 19.69 in.  
Witness Plate: 0.0008 in. Aluminum foil  
Witness Plate Distance: 19.69 in.  
Spall Catch Box: 17.32 x 17.32 in.  
Test Temperature: 55 -73 °F  
Standard Document: European Standard EN 1063:1999 Security Glazing  
Source: ISSN 0335-3931; ICS: 81.040.20  
Comments: NF EN 1063 August 2000  
Note: A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**Standard - Rating:** **BR5 - 5.56 x 45 NATO AP**  
Number of samples required: 3 samples  
Projectile Caliber : 5.56 x 45 NATO (.223 Remington)  
Cartridge Type: 62 grain type SS109 (steel penetrator)  
Velocity Range: 3084 to 3150 ft/sec.  
Number of Shots: 3 shot(s)  
Shot Spacing: 4.3 to 5.1 in. triangle  
Velocity Measurement Distance: 8.2 ft from Target  
Target Range: 32.8 ft.  
Sample Size: 19.69 x 19.69 in.  
Witness Plate: 0.0008 in. Aluminum foil  
Witness Plate Distance: 19.69 in.  
Spall Catch Box: 17.32 x 17.32 in.  
Test Temperature: 55 -73 °F  
Standard Document: European Standard EN 1063:1999 Security Glazing  
Source: ISSN 0335-3931; ICS: 81.040.20  
Comments: NF EN 1063 August 2000  
Note: A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**Standard - Rating:**

Number of samples required:	3 samples
Projectile Caliber :	7.62 x 51 NATO (.308 Winchester)
Cartridge Type:	147 grain Full Steel Jacket (M80)
Velocity Range:	2690 to 2756 ft/sec.
Number of Shots:	3 shot(s)
Shot Spacing:	4.3 to 5.1 in. triangle
Velocity Measurement Distance:	8.2 ft from Target
Target Range:	32.8 ft.
Sample Size:	19.69 x 19.69 in.
Witness Plate:	0.0008 in. Aluminum foil
Witness Plate Distance:	19.69 in.
Spall Catch Box:	17.32 x 17.32 in.
Test Temperature:	55 -73 °F
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**BR6 - 7.62 x 51 NATO****Standard - Rating:**

Number of samples required:	3 samples
Projectile Caliber :	7.62 x 51 NATO (.308 Winchester)
Cartridge Type:	150 grain Full Copper Jacket steel hard core
Velocity Range:	2657 to 2723 ft/sec.
Number of Shots:	3 shot(s)
Shot Spacing:	4.3 to 5.1 in. triangle
Velocity Measurement Distance:	8.2 ft from Target
Target Range:	32.8 ft.
Sample Size:	19.69 x 19.69 in.
Witness Plate:	0.0008 in. Aluminum foil
Witness Plate Distance:	19.69 in.
Spall Catch Box:	17.32 x 17.32 in.
Test Temperature:	55 -73 °F
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**BR7 - 7.62 x 51 NATO AP**

Note: A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**Standard - Rating:**

Number of samples required:	3 samples
Projectile Caliber :	12 gauge
Cartridge Type:	478 grain Solid Lead Brenneke Slug (1.09 ounce)
Velocity Range:	1312 to 1444 ft/sec.
Number of Shots:	1 shot
Shot Spacing: -	
Velocity Measurement Distance:	8.2 ft from Target
Target Range:	32.8 ft.
Sample Size:	19.69 x 19.69 in.
Witness Plate:	0.0008 in. Aluminum foil
Witness Plate Distance:	19.69 in.
Spall Catch Box:	17.32 x 17.32 in.
Test Temperature:	55 -73 °F
Standard Document:	European Standard EN 1063:1999 Security Glazing
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Note: A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**SG1 - Shotgun****Standard - Rating:**

Number of samples required:	3 samples
Projectile Caliber :	12 gauge
Cartridge Type:	478 grain Solid Lead Brenneke Slug (1.09 ounce)
Velocity Range:	1312 to 1444 ft/sec.
Number of Shots:	3 shot(s)
Shot Spacing:	4.5 to 5.3 in. triangle
Velocity Measurement Distance:	8.2 ft from Target
Target Range:	32.8 ft.
Sample Size:	19.69 x 19.69 in.
Witness Plate:	0.0008 in. Aluminum foil
Witness Plate Distance:	19.69 in.
Spall Catch Box:	17.32 x 17.32 in.
Test Temperature:	55 -73 °F
Standard Document:	European Standard EN 1063:1999 Security Glazing
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Note: A test sample must pass all parts of a particular standard. i.e. part 1, part 2, etc...

**SG2 - Shotgun**