

Windows, doors, shutters and blinds — Bullet resistance — Test method

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British Standard

ICS 91.060.50

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Summary of pages

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English version

Windows, doors, shutters and blinds — Bullet resistance — Test method

Fenêtres, portes, fermetures et stores —
Résistance aux balles — Méthode d'essai

Fenster, Türen, Abschlüsse —
Durchschußhemmung — Prüfverfahren

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

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Foreword

This European Standard has been prepared by Technical Committee CEN/TC 33, Doors, windows, shutters and building hardware, the Secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 1999, and conflicting national standards shall be withdrawn at the latest by April 1999.

The standard includes five informative annexes illustrating examples of target points and firing directions.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Contents

	Page
Foreword	2
1 Scope	3
2 Normative references	3
3 Definitions	3
4 Apparatus	4
5 Test specimen	4
6 Procedure	4
7 Interpretation of results	6
8 Test report	6
9 Test report summary	6
Annex A (informative) Operable windows and doors	7
Annex B (informative) Facades and fixed components	8
Annex C (informative) Components	9
Annex D (informative) Folding shutter	10
Annex E (informative) Roller shutters	11

1 Scope

This European Standard defines a test procedure to permit classification of the bullet resistance of windows, doors, shutters and blinds (complete with their infills).

This European Standard concerns only behaviour in respect of the frame of the windows, doors, shutters or blinds, their infills and the junctions between the infills and frames.

If the windows and doors are subjected to specific conditions of climate, specific conditions of test may be required.

It does not apply to the testing of glass infills. For the testing of glass infills refer to prEN 1063.

This European Standard gives no information on the behaviour of the frame subjected to other types of stresses.

It gives no information on the bullet resistance of the junction between the frame and the wall or other surrounding structure.

Shutters and blinds must be tested separately and not in conjunction with a window or door, in order to achieve classification in terms of bullet resistance.

NOTE Care should be taken to ensure that all joints between the surrounding wall and the window, door, shutter or blind will have bullet resistance at least equal to that of the window, door, shutter or blind.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 1522, *Windows, doors, shutters and blinds — Bullet resistance — Requirements and classification.*

prEN 1063, *Specification for security glazing — Bullet resistant glazing — Classification and test methods.*

3 Definitions

For the purpose of this European Standard, the following definitions apply.

3.1

test specimen

sample prepared for testing

3.2

perforation

piercing of a test specimen by a bullet or by bullet fragments, and/or creation of an opening from the attack face to the rear face

The following are considered to constitute perforation:

- a) passing through the test specimen by the bullet or any part of it;
- b) splitting of the rear surface of the test specimen by the bullet or part of it, even if the bullet is visibly retained in the rear of the test specimen;
- c) creation of an opening right through the specimen, even if that opening closes again afterwards.

Perforation has not occurred if none of the above criteria are fulfilled.

3.3

witness foil

sheet of foil positioned behind the test specimen in order to detect splinters ejected from the rear face of the test specimen by the impact of the bullet and to determine the risks of injury due to the ejection of these splinters

3.4

splinters collecting box

receptacle for gathering splinters ejected from the rear face and bullet fragments passing through the test specimen, positioned between the test specimen and the witness foil

3.5

presence or absence of splinters

presence of splinters, designated “S” is considered to be applicable when there is no perforation of the test specimen by the bullet or any part of it, but there is perforation of the witness foil caused by splinters which are ejected from the rear face of the test specimen

absence of splinters, designated “NS” is considered to be applicable in all cases where there is no perforation of the witness foil

3.6

attack face

the face of a test window, door, shutter or blind designed to face the attack. It corresponds to that face of the installed infill which is intended to fulfil the same function

3.7

striking distance

the distance between the centres of two target points on the test specimen

3.8

bullet velocity

the velocity of the bullet measured within 2,5 m in front of the attack face of the test specimen

3.9

test range

the distance between the muzzle of the firearm and the attack face of the test specimen

3.10

submission document

mandatory set of documents to be delivered to the testing laboratory with the test specimen