

Windows, doors, and shutters — Explosion resistance — Requirements and classification —

Part 2: Range test

The European Standard EN 13123-2:2004 has the status of a
British Standard

ICS 13.230; 91.060.50

National foreword

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- Anforderungen und Klassifizierung - Teil 2:
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Contents

page

Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Requirements	4
5 Classification of explosion resistance – Range test (EXR)	5

Tables

Table 1 — Classification, charge mass and range	5
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Foreword

This document (EN 13123-2:2004) has been prepared by Technical Committee CEN/TC 33 "Doors, windows, shutters, building hardware and curtain walling", 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of an identical text or by endorsement, at the latest by August 2004, and conflicting national standards shall be withdrawn at the latest by August 2004.

This European Standard is one of a series of standards for windows, doors and shutters.

The requirements and classification relate to the test method specified in EN 13124-2.

No existing European Standard is superseded.

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

1 Scope

This European Standard specifies the criteria which windows, doors and shutters shall satisfy to achieve a classification when submitted to the test method described in EN 13124-2.

This European Standard concerns a test method against blast waves in open air resulting from high explosives that can be carried by hand and placed a few metres from a target. At such close distances blast values vary across an attack face. Controlled measurement of the actual blast on the face of the test specimen being difficult, costly and subject to inaccuracy, consistency of the blast forces is therefore controlled in this European Standard by the characteristics of the explosive charge and its location.

This European Standard covers only the behaviour of the complete unit including infill, frame and fixings as tested. It gives no information on the ability of the surrounding wall or building structure to resist the direct or transmitted forces.

If the windows, doors and shutters are intended for specific conditions of climate, specific test conditions can be required (see clause 4).

This European Standard gives no information on the explosion resistance capacity of the wall or other surrounding structure.

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 (including amendments).

EN 13124-2: 2004, *Windows, doors and shutters – Explosion resistance – Test method – Part 2: Range test.*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13124-2:2004 apply.

4 Requirements

To achieve a particular class of explosion resistance, the test specimen shall

- a) be subjected to a blast pressure wave generated by the detonation of a specific charge at a specific stand-off, as specified in clause 5, Table 1 and in accordance with charge composition described in EN 13124-2:2004, annex A

and,

- b) show no damage exceeding that specified in EN 13124-2:2004, 9.1.

After the test any opening element shall remain retained in the closed position whether the opening mechanisms are still operable or not. It shall not be possible to gain unauthorised access from the attack face through the test specimen. It is not a requirement of the test that performance in other respects such as air permeability, watertightness, wind resistance etc. be maintained.

If the intended application of the window, door or shutter is such that it will be specifically subjected to climatic extremes, the test specimen shall be tested under specific conditions to be agreed between the test applicant and the testing laboratory.

NOTE Care should be taken to ensure that in the intended application, all connections to the product (window, door or shutter) offer protection which is at least equal to that of these products.

5 Classification of explosion resistance – Range test (EXR)

The classes EXR1 to EXR5 (see Table 1) are in order of increasing explosion resistance. When a window, door or shutter achieves a particular class it also automatically achieves all lower classes.

Table 1 — Classification, charge mass and range

Classification code	Charge mass (kg)	Stand-off (m)
EXR1	3	5,0
EXR2	3	3,0
EXR3	12	5,5
EXR4	12	4,0
EXR5	20	4,0

NOTE Results of the tests are further notated with an addition of an S or NS suffix with regard to the presence or absence of splinters originating from the rear (protected) face of the test specimen.

EXAMPLE 1 EXR1 (S) Splinters ejected from rear face (protected side) of the glass or infill material.

EXAMPLE 2 EXR1 (NS) No splinters ejected from rear face (protected side) of the glass or infill material.

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