

Windows, doors, shutters and curtain walling -  
Explosion resistance - Test method - Part 2: Arena test

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

|                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>See Eesti standard EVS-EN 13124-2:2025 sisaldab Euroopa standardi EN 13124-2:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 12.11.2025.</p> <p>Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.</p> | <p>This Estonian standard EVS-EN 13124-2:2025 consists of the English text of the European standard EN 13124-2:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 12.11.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile [standardiosakond@evs.ee](mailto:standardiosakond@evs.ee).

ICS 13.230, 91.060.50

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele. Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis-ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis-ja Akrediteerimiskeskusega: Koduleht [www.evs.ee](http://www.evs.ee); telefon 605 5050; e-post [info@evs.ee](mailto:info@evs.ee)

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation. No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation: Homepage [www.evs.ee](http://www.evs.ee); phone +372 605 5050; e-mail [info@evs.ee](mailto:info@evs.ee)

English Version

## Windows, doors, shutters and curtain walling - Explosion resistance - Test method - Part 2: Arena test

Fenêtres, portes, fermetures et façades rideaux -  
Résistance à l'explosion - Méthode d'essai - Partie 2 :  
Essai en arène

Fenster, Türen, Abschlüsse und Vorhangfassaden -  
Sprengwirkungshemmung - Prüfverfahren - Teil 2:  
Freilandversuch

This European Standard was approved by CEN on 29 September 2025.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

## Contents

Page

|                                                                |    |
|----------------------------------------------------------------|----|
| European foreword .....                                        | 3  |
| 1 Scope.....                                                   | 4  |
| 2 Normative references.....                                    | 4  |
| 3 Terms and definitions .....                                  | 4  |
| 4 General.....                                                 | 7  |
| 5 Requirements.....                                            | 7  |
| 6 Apparatus .....                                              | 8  |
| 6.1 Explosive test range .....                                 | 8  |
| 6.2 Reaction structure.....                                    | 8  |
| 6.3 Connections.....                                           | 9  |
| 6.4 Equipment for measuring.....                               | 9  |
| 7 Explosive charge.....                                        | 10 |
| 8 Test specimen .....                                          | 11 |
| 9 Procedure .....                                              | 11 |
| 9.1 Installation .....                                         | 11 |
| 9.2 Test - Explosion pressure resistance (PXR, VXR) .....      | 12 |
| 9.3 Pressure or impulse outside the specified tolerances ..... | 12 |
| 9.4 Test in open condition .....                               | 13 |
| 10 Sequence of the test .....                                  | 13 |
| 11 Evaluation of results .....                                 | 14 |
| 11.1 General.....                                              | 14 |
| 11.2 Internal hazard class .....                               | 14 |
| 11.3 Optional external hazard rating.....                      | 16 |
| 11.4 Classification.....                                       | 17 |
| 11.5 Validity of results.....                                  | 17 |
| 12 Test report.....                                            | 17 |
| 13 Test report summary.....                                    | 19 |
| Bibliography .....                                             | 20 |

## European foreword

This document (EN 13124-2:2025) 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 May 2026 and conflicting national standards shall be withdrawn at the latest by May 2026.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13124-2:2004.

EN 13124-2:2025 includes the following significant technical changes with respect to EN 13124-2:2004:

- inclusion of testing of curtain walling;
- inclusion of hazard classes and the measurement connected to them;
- revision and addition of terms and definitions;
- addition of test procedures for open condition;
- addition of the requirements for test setup and its connection to the test sample;
- editorial changes.

The document series EN 13124 *Windows, doors, shutters and curtain walling — Explosion resistance — Test method* currently consists of:

- *Part 1: Shock tube;*
- *Part 2: Arena test.*

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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

## 1 Scope

This document defines a test method to permit a classification according to EN 13123-2:2025 for explosion resistance of windows, doors, shutters as well as curtain walling elements, complete with their frames, infills and fixings. This document gives no information on the ability of the surrounding wall or building structure to resist the direct or transmitted forces.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12216, *Shutters, external blinds, internal blinds — Terminology, glossary and definitions*

EN 12519, *Windows and pedestrian doors — Terminology*

EN 13119, *Curtain walling — Terminology*

EN 13123-1:2025, *Windows, doors, shutters and curtain walling — Explosion resistance — Requirements and classification — Part 1: Shock tube*

EN 13123-2:2025, *Windows, doors, shutters and curtain walling — Explosion resistance — Requirements and classification — Part 2: Arena test*

EN 13124-1:2025, *Windows, doors, shutters and curtain walling — Explosion resistance — Test method — Part 1: Shock tube*

EN 13164, *Thermal insulation products for buildings — Factory made extruded polystyrene foam (XPS) products — Specification*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12216, EN 12519, EN 13119 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp/>

— IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1

#### **test specimen**

window, door, shutter or curtain walling specimen, which is prepared and submitted for testing

### 3.2

#### **attack face**

face of the test specimen, which is designed to face the explosion

### 3.3

#### **rear face**

opposite side of the test specimen to the attack face