

Windows, doors, shutters and curtain walling -
Explosion resistance - Requirements and classification
- Part 1: Shock tube

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13123-1:2025 sisaldab Euroopa standardi EN 13123-1:2025 ingliskeelset teksti. Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 19.11.2025. Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	This Estonian standard EVS-EN 13123-1:2025 consists of the English text of the European standard EN 13123-1:2025. This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation. Date of Availability of the European standard is 19.11.2025. The standard is available from the Estonian Centre for Standardisation and Accreditation.
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ICS 13.230, 91.060.50

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English Version

Windows, doors, shutters and curtain walling - Explosion
resistance - Requirements and classification - Part 1: Shock
tube

Fenêtres, portes, fermetures et façades rideaux -
Résistance à l'explosion - Prescriptions et classification
- Partie 1: Tube à effet de souffle (shock tube)

Fenster, Türen, Abschlüsse und Vorhangfassaden -
Sprengwirkungshemmung - Anforderungen und
Klassifizierung - Teil 1: Stoßrohr

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

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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.

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

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European foreword

This document (EN 13123-1:2025) 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 13123-1:2001.

EN 13123-1:2025 includes the following significant technical changes with respect to EN 13123-1:2001:

- inclusion of testing of curtain walling;
- inclusion of loading of gas explosions (EPR 0), EPR1+ and user defined load class;
- editorial changes.

The EN 13123 series of standards *Windows, doors, shutters and curtain walling — Explosion resistance — Requirements and classification* 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 specifies the requirements and classification for assessing the explosive resistance of windows, doors, shutters as well as curtain walling elements, complete with their frames, infills and fixings, for use in both internal and external locations in buildings, when submitted to a shock tube test in accordance with EN 13124-1:2025. This document gives no information on the explosion resistance capacity of the wall or other surrounding structure.

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 12216, EN 12519, EN 13119 and EN 13124-1:2025 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/>

4 General

The document considers free-field high explosive events in the order of:

- 100 kg to 2 500 kg TNT (Trinitrotoluol) at stand-off distances from about 35 m to 50 m, described by the fixed loading levels EPR0 to EPR4.

5 Requirements

Resistance to damage and pressure shall be classified in accordance with Clause 6. This document provides the option to do tests either:

- a) for fixed loading class levels (EPR classes); or
- b) for user-defined loading classes (EPRU) with specified parameters for peak positive reflected pressure, peak positive specific impulse and minimum duration for further high explosive detonations and gas explosions.

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

- c) be subjected to not less than the corresponding test level of each of peak positive reflected pressure, peak positive specific impulse and minimum duration specified in Clause 6, Table 1 and Figure 1; and