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PLAHVATUSOHTLIKUD AINED. OSA 2: TERMILISE
STABIILSUSE MÄÄRAMINE

Explosives for civil uses - Explosives for blasting,
boosters and explosive substances - Part 2:
Verification of thermal stability

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 13631-2:2025 sisaldab Euroopa standardi EN 13631-2:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.10.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 13631-2:2025 consists of the English text of the European standard EN 13631-2:2025.</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 01.10.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN 13631-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 13631-2:2002

English Version

Explosives for civil uses - Explosives for blasting, boosters and explosive substances - Part 2: Verification of thermal stability

Explosifs à usage civil - Explosifs de mine, relais de
détonation et substances explosives - Partie 2 :
Vérification de la stabilité thermique

Explosivstoffe für zivile Zwecke - Sprengstoffe,
Verstärkungsladungen und Explosivstoffe - Teil 2:
Überprüfung der thermischen Stabilität

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.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 13631-2:2025) has been prepared by Technical Committee CEN/TC 321 “Explosives for civil uses”, the secretariat of which is held by UNE.

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 2026, and conflicting national standards shall be withdrawn at the latest by April 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 13631-2:2002.

EN 13631-2:2025 includes the following significant technical changes with respect to EN 13631-2:2002:

- a) the document title has been changed from “Explosives for civil uses — High explosives — Part 2: Determination of thermal stability of explosives” to “Explosives for civil uses — Explosives for blasting, boosters and explosive substances — Part 2: Verification of thermal stability”;
- b) the Scope has been revised to clarify the covered and not covered explosives;
- c) the normative references have been updated;
- d) the terminology entry 3.1 has been removed;
- e) the Clause 4 “Principle” has been added;
- f) the Clause “Apparatus” has been updated and the Figure 1 has been removed;
- g) the Clause “Procedure” has been revised for clarification purposes and the Figure 2 has been removed;
- h) the Clause 8 “Expression of test results” has been added;
- i) the Clause “Test report” does no longer require conformity with EN ISO/IEC 17025 and the information to be provided has been updated;
- j) the Annex ZA has been updated;
- k) the Bibliography has been added and lists, e.g. EN ISO/IEC 17025:2017.

This document has been prepared under a standardization request addressed to CEN by the European Commission. The Standing Committee of the EFTA States subsequently approves these requests for its Member States.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

A list of all parts in the EN 13631 series, published under the general title *Explosives for civil uses — Explosives for blasting, boosters and explosive substances*, can be found on the CEN website.

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 organisations 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.

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1 Scope

This document specifies a test method for the verification of the thermal stability at 75 °C of explosives for blasting, boosters and explosive substances.

This document also applies to black powder when used for blasting.

This document also applies to solid gun propellants, solid rocket propellants, black powder used as propellants, for safety fuse or for pyrotechnics and powder cakes as covered by EN 13938-1:2025.

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 13857-1:2025, *Explosives for civil uses — Part 1: Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13857-1:2025 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 Principle

Knowledge on thermal stability is relevant to guarantee the safety of the explosive and to prevent inadvertent initiation under environmental conditions to which it can be exposed.

Thermal stability is verified by exposing the explosive to be tested at a temperature of 75 °C. It is observed whether initiation or ignition or a change of the mass of the sample occurs.

NOTE Thermal stability at the temperature of 75 °C is also required for transport and tested in an equivalent way in the UN Manual of Tests and Criteria.

5 Apparatus

5.1 Conditioning chamber, a closed compartment which is capable of being controlled at a temperature of (75 ± 2) °C, equipped with or connected to a time-controlled switch, where the time can be set with an accuracy of within ± 1 min.

NOTE In case of a malfunction of the thermostat, a dual thermostat or other means can provide protection against thermal run-away.

5.2 Balance, readable to the nearest 0,1 g.

5.3 Three thermocouples of a material that is inert to the explosive under test.

5.4 Temperature recording system, capable of measuring temperatures to ± 1 °C over a period of 48 h with one measurement per second.