

TSIVIILKÄIBES OLEVAD LÕHKEAINED. DETONAATORID
JA DETONEERNÖÖRIDE RELEED. OSA 2:
DETONAATORITE, PEALMISTE ÜHENDUSPLOKKIDE,
DETONEERNÖÖRIDE RELEEDE JA IMPULSI
SIIRDETORUDE TERMILISE STABIILSUSE MÄÄRAMINE

Explosives for civil uses - Detonators and detonating
cord relays - Part 2: Verification of thermal stability of
detonators, surface connectors, detonating cord relays
and shock tubes

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13763-2:2025 sisaldab Euroopa standardi EN 13763-2:2025 ingliskeelset teksti. Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.10.2025. Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	This Estonian standard EVS-EN 13763-2:2025 consists of the English text of the European standard EN 13763-2:2025. 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 01.10.2025. The standard is available from the Estonian Centre for Standardisation and Accreditation.
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English Version

Explosives for civil uses - Detonators and detonating cord
relays - Part 2: Verification of thermal stability of
detonators, surface connectors, detonating cord relays and
shock tubes

Explosifs à usage civil - Détonateurs et relais pour
cordeau détonant - Partie 2 : Vérification de la stabilité
thermique des détonateurs, connecteurs de surface,
relais pour cordeau détonant et tubes à transmission
d'ondes de choc

Explosivstoffe für zivile Zwecke - Zünder und
Sprengschnurverbinder - Teil 2: Überprüfung der
thermischen Stabilität bei hohen Temperaturen

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
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European foreword

This document (EN 13763-2:2025) 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 13763-2:2002.

EN 13763-2:2025 includes the following significant technical changes with respect to EN 13763-2:2002:

- a) the document title has been changed from “Detonators and relays — Part 2: Determination of thermal stability” to “Detonators and detonating cord relays — Part 2: Verification of thermal stability of detonators, surface connectors, detonating cord relays and shock tubes”;
- b) the Scope has been revised so that the document now also applies to plain detonators, semi-finished detonators and electronic detonators;
- c) the normative references have been updated;
- d) the Clause 4 “Principle” has been added;
- e) the Clause “Apparatus” has been updated and enlarged;
- f) the Clause “Test pieces” is now called “Preparation of test sample”, has been revised and enlarged to include plain detonators, semi-finished detonators and electronic detonators;
- g) the Clause “Procedure” has been revised and enlarged to include plain detonators, semi-finished detonators and electronic detonators;
- h) the Clause 8 “Expression of 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 revised and enlarged;
- j) the Annex ZA has been updated;
- k) the Bibliography has been added and lists 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 13763 series, published under the general title *Explosives for civil uses — Detonators and detonating cord relays*, 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 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 a test method for the verification of thermal stability.

This document is applicable to electric detonators, non-electric detonators, electronic detonators, plain detonators, semi-finished detonators, surface connectors and detonating cord relays as well as shock tubes.

This document does not apply to electronic initiation systems.

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 13763-1:2025, *Explosives for civil uses — Detonators and detonating cord relays — Part 1: Requirements*

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:

- IEC Electropedia: available at <https://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp/>

4 Principle

Detonators, surface connectors, shock tubes and detonating cord relays can be subjected to high temperatures during storage, transport or use. Thermal stability is the ability to withstand high temperatures without undergoing inadvertent initiation.

For the verification of the thermal stability of an explosive, test pieces are subjected to an elevated temperature higher than the specified maximum temperature for use or storage, but at least $(75 \pm 2) ^\circ\text{C}$. It is observed whether the test pieces detonate or deflagrate or show other evidence of reaction.

5 Apparatus

5.1 Conditioning chamber, capable of maintaining the highest temperature as specified in 7.1 or 7.2, respectively.

5.2 Time-measuring device, capable of being read to the nearest 1 min.

5.3 Rack(s), made from a material resistant to the temperature applied during testing (see Clause 7), capable of holding a total of 25 detonator or surface connector test pieces and having a size to fit into the conditioning chamber (5.1) when equipped with the test pieces.