

TSIVIILKÄIBES OLEVAD LÕHKEAINED. DETONAATORID
JA DETONEERNÖÖRIDE RELEED. OSA 6:
MAGISTRAAL-LIINIDE PRAGUNEMISKINDLUSE
MÄÄRAMINE

Explosives for civil uses - Detonators and detonating
cord relays - Part 6: Verification of resistance to
cracking of leading wires

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 13763-6:2025 sisaldab Euroopa standardi EN 13763-6:2025 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 13763-6:2025 consists of the English text of the European standard EN 13763-6:2025.</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 13763-6

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 13763-6:2003

English Version

Explosives for civil uses - Detonators and detonating cord relays - Part 6: Verification of resistance to cracking of leading wires

Explosifs à usage civil - Détonateurs et relais pour cordeau détonant - Partie 6 : Vérification de la résistance aux craquelures des fils d'amorce

Explosivstoffe für zivile Zwecke - Zünder und Sprengschnurverzögerer - Teil 6: Überprüfung des Widerstandes von Zünderdrähten gegen Rissbildung

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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Contents	Page
European foreword	3
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Principle	5
5 Apparatus	5
6 Preparation of test sample)	6
7 Procedure	6
8 Expression of results	7
9 Test report	7
Annex ZA (informative) Relationship between this European Standard and the essential requirements of Directive 2014/28/EU relating to the making available on the market and supervision of explosives for civil uses aimed to be covered	8
Bibliography	9

European foreword

This document (EN 13763-6:2025) 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 13763-6:2003.

EN 13763-6:2025 includes the following significant technical changes with respect to EN 13763-6:2003:

- a) the document title has been changed from “Detonators and relays — Part 6: Determination of resistance to cracking in low temperatures of leading wires” to “Detonators and detonating cord relays — Part 6: Verification of resistance to cracking of leading wires”;
- b) the Introduction has been removed;
- c) the Scope has been revised to clarify the covered and not covered explosives;
- d) the normative references have been updated;
- e) the Clause 4 “Principle” has been added;
- f) the Clause “Apparatus” has been revised;
- g) the Clause “Test pieces” is now called “Preparation of test sample”;
- h) the Clause “Procedure” has been revised for clarification;
- i) the Clause 8 “Expression of results” has been added;
- j) the Clause “Test report” does no longer require conformity with EN ISO/IEC 17025 and the information to be provided has been revised;
- k) the former Annex A “Range of applicability of the test method” has been removed;
- l) the Annex ZA has been updated;
- m) 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 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

1 Scope

This document specifies a test method for the verification of the resistance to cracking at low temperatures of the leading wire insulation of leading wires of electric and electronic detonators.

This document does not apply to non-electric detonators, surface connectors, detonating cord relays, shock tubes and 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 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:

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

4 Principle

During use on site, leading wires used for electric or electronic detonators can be subjected to conditions which can result in cracking of the insulation, for instance when in low temperatures loops on leading wires are subjected to a sudden pulling force since the insulation material could become more brittle with decreasing temperature.

For the verification of the resistance to cracking, three loops are made in a test piece and it is attached to a frame at one end and a weight at the other end. After being conditioned at the specified lowest temperature of use, the test piece is subjected to a pulling force applied by letting the attached weight fall freely. It is checked whether the test piece shows any cracks with exposed electrical wire.

5 Apparatus

5.1 Conditioning chamber, in accordance with EN 13763-1:2025, 4.2.1.5 (for leading wires in electric detonators), 4.4.1.5 (for leading wires in electronic detonators), with a tolerance of ± 2 °C. The conditioning chamber shall be large enough to position the test piece as attached to the frame (5.2), the weight (5.3) and the release system (5.4) inside it so that the test piece can hang freely as shown in Figure 1 but also to carry out the free fall-procedure inside it.

5.2 Frame, for attaching the test piece on one end. The frame shall be rigid enough to support the impact of the weight (5.3) hanging on the test piece when dropped as described in Clause 7. The frame shall be at a height to allow the free fall of the weight as attached to the test piece upon release.

5.3 Weight, with a mass of (500 ± 10) g.

5.4 Release system, for holding and dropping the weight (5.3).

EXAMPLE Electro-magnetically-operated release system.