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DETONEERNÖÖRID JA SÜÜTENÖÖRID. OSA 11:  
DETONEERNÖÖRIDE DETONATSIOONIKIIRUSE  
MÄÄRAMINE

Explosives for civil uses - Detonating cords and safety fuses - Part 11: Determination of velocity of detonation of detonating cords

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 13630-11:2025 sisaldab Euroopa standardi EN 13630-11:2025 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 13630-11:2025 consists of the English text of the European standard EN 13630-11:2025.</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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ICS 71.100.30

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EUROPEAN STANDARD

**EN 13630-11**

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2025

ICS 71.100.30

Supersedes EN 13630-11:2002

English Version

## Explosives for civil uses - Detonating cords and safety fuses - Part 11: Determination of velocity of detonation of detonating cords

Explosifs à usage civil - Cordeaux détonants et mèches de sûreté - Partie 11 : Détermination de la vitesse de détonation des cordeaux détonants

Explosivstoffe für zivile Zwecke - Sprengschnüre und Sicherheitsanzündschnüre - Teil 11: Bestimmung der Detonationsgeschwindigkeit von Sprengschnüren

This European Standard was approved by CEN on 15 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 13630-11:2025) 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 13630-11:2002.

EN 13630-11:2025 includes the following significant technical changes with respect to EN 13630-11:2002:

- a) the Scope has been revised to clarify the explosives covered and not covered in the document;
- b) the normative references have been updated;
- c) the Clause 4 “Principle” has been added;
- d) the Clause “Apparatus” has been updated and enlarged – especially, an alternative detonation velocity measuring system has been added;
- e) the Clause “Test pieces” is now called “Preparation of test sample” and has been enlarged;
- f) the Clause “Procedure” now contains subclauses and addresses separately the procedures when using the time-measuring equipment (start-stop method) and the procedures when using the alternative detonation velocity measuring system (continuous method);
- g) the former Clause 7 “Calculation of results” has been integrated into 7.2;
- 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 updated and enlarged;
- j) the former Annex A “Range of applicability of the test method” has been removed;
- k) the Annex ZA has been updated;
- l) 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 13630 series, published under the general title *Explosives for civil uses — Detonating cords and safety fuses*, 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.

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## 1 Scope

This document specifies a method for the determination of the velocity of detonation of detonating cords. This document does not apply to safety fuses.

## 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 13630-1:2025, *Explosives for civil uses — Detonating cords and safety fuses — 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.

## 4 Principle

The detonation velocity is an important performance characteristic for the use of detonating cords.

The detonation velocity of detonating cords is determined by measuring the time it takes for the detonation front to travel a specific distance.

## 5 Apparatus

### 5.1 Velocity of detonation measuring equipment

**5.1.1 Velocity of detonation measuring equipment for the start-stop-method**, consisting of two sensors capable of detecting the passing of the detonation front through the test piece, and the electronic equipment to record the time between the signals produced by the two sensors in milliseconds (ms) to an accuracy of  $\pm 1 \mu\text{s}$ .

NOTE Examples of sensors are optical fibres, self-shorting pins, ionization pins, piezoelectric pins and enamel-insulated twisted copper wires.

**5.1.2 Velocity of detonation measuring equipment for the continuous method**, consisting of a continuous probe and electronic equipment to record and analyse the signal from the continuous probe to derive the velocity of detonation.

**5.2 Detonator**, as specified as means of initiation for the tested detonating cord in accordance with EN 13630-1:2025, 4.1.4.

**5.3 Means of sealing**, for safety reasons, to close the open ends of the detonating cords. The means of sealing shall not affect the test result.

EXAMPLE Adhesive tape, made from paper or plastic, or rubber cups.

**5.4 Adhesive tape** made from paper or plastic.

**5.5 Two supports** to allow the suspension of the test arrangement at a height  $\geq 200$  mm above the ground.