
**Eksplzivni za civilno uporabo - Detonacijske in počasi goreče vžigalne vrvic - 2.
del: Ugotavljanje toplotne stabilnosti detonacijskih in počasi gorečih vžigalnih
vrvic**

Explosives for civil uses - Detonating cords and safety fuses - Part 2: Determination of thermal stability of detonating cords and safety fuses

Explosivstoffe für zivile Zwecke - Sprengschnüre und Sicherheitsanzündschnüre - Teil 2: Bestimmung der thermischen Stabilität von Sprengschnüren und Sicherheitsanzündschnüren
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Explosifs à usage civil - Cordeaux détonants et mèches de sûreté - Partie 2: Détermination de la stabilité thermique des cordeaux détonants et mèches de sûreté

Ta slovenski standard je istoveten z: prEN 13630-2

ICS:

71.100.30	Eksplzivni. Pirotehnika in ognjemeti	Explosives. Pyrotechnics and fireworks
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English Version

Explosives for civil uses - Detonating cords and safety fuses - Part 2: Determination of thermal stability of detonating cords and safety fuses

Explosifs à usage civil - Cordeaux détonants et mèches de sûreté - Partie 2 : Détermination de la stabilité thermique des cordeaux détonants et mèches de sûreté

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This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 321.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (prEN 13630-2:2021) has been prepared by Technical Committee CEN/TC 321 “Explosives for civil uses”, the secretariat of which is held by UNE.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 13630-2:2002.

In comparison with the previous edition, the following technical modifications have been made:

- a) the normative references have been updated;
- b) Clause 4, *Principle*, has been added;
- c) Annex A, *Range of applicability of the test method*, has been removed and the content has been moved to Clause 1, *Scope*;
- d) Annex ZA has been updated.

This document has been prepared under a Standardization Request (M/562) annexed to the Commission Implementing Decision C(2019)6634 final as regards Explosives for civil uses given to CEN by the European Commission and the European Free Trade Association, and supports Essential Safety requirements of Directive 2014/28/EU.

For relationship with Directive 2014/28/EU, see informative Annex ZA, which is an integral part of this document.

oSIST prEN 13630-2:2021

EN 13630, *Explosives for civil uses — Detonating cords and safety fuses*, is currently composed of the following parts:

- *Part 1: Requirements*
- *Part 2: Determination of thermal stability of detonating cords and safety fuses*
- *Part 3: Determination of sensitiveness to friction of the core of detonating cords*
- *Part 4: Determination of sensitiveness to impact of detonating cords*
- *Part 5: Determination of resistance to abrasion of detonating cords*
- *Part 6: Measurement of resistance to tension of detonating cords*
- *Part 7: Determination of reliability of initiation of detonating cords*
- *Part 8: Determination of resistance to water of detonating cords and safety fuses*
- *Part 9: Determination of transmission of detonation from detonating cord to detonating cord*
- *Part 10: Determination of initiating capability of detonating cords*
- *Part 11: Determination of velocity of detonation of detonating cords*
- *Part 12: Determination of burning duration of safety fuses*

prEN 13630-2:2021 (E)

1 Scope

This document specifies a method to assess the thermal stability of detonating cord and safety fuses.

The test result is valid for temperature up to 75 °C during 48 h.

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.

prEN 13857-1:2021, *Explosives for civil uses — Part 1: Terminology*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 13857-1:2021 and the following apply.

3.1

thermal stability

safety property for explosive substances or articles

Note 1 to entry: Tests are carried out at an elevated temperature, for a specific time, to ensure that substances or articles are thermally stable for transport or storage.

Note 2 to entry: The results of this test will indicate whether the detonating cord or safety fuse is thermally stable and that it will not detonate, burn or decompose by itself when the detonating cord or safety fuse is kept at a temperature of 75 °C for a period of 48 h.

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4 Principle

<https://standards.iteh.ai/catalog/standards/sist/9f4724e6-0b55-44cf-81ba-4e4ed1a12cab/osist-pren-13630-2-2021>

The thermal stability of detonating cords and safety fuses is assessed by subjecting them to an elevated temperature for a given time.

5 Apparatus

5.1 Heating cabinet, capable of sustaining a temperature of (75 ± 2) °C.

The heating cabinet should be equipped with an inner ventilation system and continuous recording of temperature. It should have dual thermostats or some other means of protection against thermal run-away if the control thermostat malfunctions. Electrical equipment should be safe for use with explosives.

5.2 Balance, capable of weighing to $\pm 0,1$ g.

6 Preparation of test samples

Depending of the type of product to be tested, select three test samples according to the following:

- for detonating cords of less or equal to 50 g/m core loading, each test samples shall be $(1\ 000 \pm 5)$ mm in length;
- for detonating cords of more than 50 g/m core loading, each test samples shall be of a sufficient length to contain at least 50 g of explosive;
- for safety fuse, each test samples shall be $(1\ 000 \pm 5)$ mm in length.

Seal both ends of all the test samples with a means of sealing stable at 75 °C and compatible with the explosive under test (e.g. adhesive tape) to avoid leakage of explosive during testing.

NOTE For information, the number of test samples to be tested is based on the current sampling practice which is in place for decades and for which there is no evidence supporting a change for more or less samples.

7 Procedure

Set the temperature of the heating cabinet (5.1) to 75 °C.

Take and record the initial weights of the different test samples using the balance (5.2).

Place the sealed test sample or test samples (more than one test sample may be tested at the same time) inside the heating cabinet avoiding contact between test samples each other and with the inner walls of the heating cabinet. Maintain the temperature of the heating cabinet at (75 ± 2) °C for 48_0^{+1} h.

If an explosion of detonating cord, an ignition of safety fuse or a chemical decomposition is observed before the end of the 48 h period, the test should be stopped. However, continuous observation of the test sample(s) under test is not necessary.

After 48 h in the heating cabinet at 75 °C, remove the test pieces and check that no explosion, ignition or other evidence of chemical decomposition has occurred.

Take and record the final weights of the different test samples using the balance (5.2).

NOTE A change of colour of the coating of the sample is not considered as a chemical decomposition.

8 Test report

The test report should conform to EN ISO/IEC 17025:2017, 7.8.2 and 7.8.3. In addition, the following information shall be given:

- a) reference to this document (i.e. EN 13630-2:202X);
- b) whether any explosion of detonating cord, ignition of safety fuse, or other evidence of chemical decomposition has occurred;
- c) any weight lost.