



SLOVENSKI STANDARD oSIST prEN 13630-1:2021

01-april-2021

**Eksplzivni za civilno uporabo – Detonacijske in počasi goreče vžigalne vrvice – 1.
del: Zahteve**

Explosives for civil uses - Detonating cords and safety fuses - Part 1: Requirements

Explosivstoffe für zivile Zwecke - Sprengschnüre und Sicherheitsanzündschnüre - Teil 1:
Anforderungen

Explosifs à usage civil - Cordeaux détonants et mèches de sûreté - Partie 1: Exigences

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Ta slovenski standard je istoveten z: prEN 13630-1

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ICS:

71.100.30	Eksplzivni. Pirotehnika in ognjemeti	Explosives. Pyrotechnics and fireworks
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EUROPEAN STANDARD
NORME EUROPÉENNE
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prEN 13630-1

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Will supersede EN 13630-1:2003

English Version

Explosives for civil uses - Detonating cords and safety fuses - Part 1: Requirements

Explosifs à usage civil - Cordeaux détonants et mèches de sûreté - Partie 1 : Exigences

Explosivstoffe für zivile Zwecke - Sprengschnüre und Sicherheitsanzündschnüre - Teil 1: Anforderungen

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.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 13630-1:2021) 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 13630-1:2003.

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

- a) the normative references have been updated;
- b) 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.

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 13630-1:2021 (E)**1 Scope**

This document specifies the requirements for detonating cords and safety fuses for civil uses, when subjected to the test methods defined in the standards referred to in Clause 2.

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 13630-2:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 2: Determination of thermal stability of detonating cords and safety fuses*

prEN 13630-3:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 3: Determination of sensitiveness to friction of the core of detonating cords*

prEN 13630-4:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 4: Determination of sensitiveness to impact of detonating cords*

prEN 13630-5:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 5: Determination of resistance to abrasion of detonating cords*

prEN 13630-6:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 6: Measurement of resistance to tension of detonating cords*

prEN 13630-7:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 7: Determination of reliability of initiation of detonating cords*

prEN 13630-8:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 8: Determination of resistance to water of detonating cords and safety fuses*

prEN 13630-9:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 9: Determination of transmission of detonation from detonating cord to detonating cord*

prEN 13630-10:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 10: Determination of initiating capability of detonating cords*

prEN 13630-11:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 11: Determination of velocity of detonation of detonating cords*

prEN 13630-12:2021, *Explosives for civil uses — Detonating cords and safety fuses — Part 12: Determination of burning duration of safety fuses*

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 apply.

4 Requirements for detonating cords

4.1 Thermal stability

When tested in accordance with prEN 13630-2:2021, there shall be no explosion nor other evidence of chemical decomposition.

4.2 Sensitiveness to friction of the core of detonating cords

When tested in accordance with prEN 13630-3:2021, the sensitiveness to friction of the core of detonating cord shall be not less than 30 N.

4.3 Sensitiveness to impact of detonating cords

When tested in accordance with prEN 13630-4:2021, there shall be no explosion nor deflagration for any of the test samples.

4.4 Resistance to abrasion

When tested in accordance with prEN 13630-5:2021, none of the test samples shall detonate or break and the explosive core of the detonating cord shall not be exposed.

4.5 Resistance to tension of detonating cords

When tested in accordance with prEN 13630-6:2021, none of the test samples shall break within 30 min under tension and all the test samples shall function completely when initiated.

4.6 Reliability of initiation (standards.iteh.ai)

When tested in accordance with prEN 13630-7:2021, all the test samples shall produce a complete detonation and make an indentation on the witness plate or for low-energy detonating cord when a witness detonator is used the witness detonator shall be initiated.

4.7 Resistance to water

When submitted to the test described in prEN 13630-8:2021 and tested in accordance with prEN 13630-7:2021, all the test samples shall produce a complete detonation.

4.8 Transmission of detonation from detonating cord to detonation cord

When tested in accordance with prEN 13630-9:2021, all the acceptor cords shall produce a complete detonation.

4.9 Initiating capability of detonating cords

When tested in accordance with prEN 13630-10:2021, the initiating capability (I) shall be at least the value given by the manufacturer.

4.10 Velocity of detonation

When tested in accordance with prEN 13630-11:2021, the velocity of detonation of each of eight test samples shall be within $\pm 10\%$ of the value given by the manufacturer.

5 Requirements for safety fuses

5.1 Thermal stability

When tested in accordance with prEN 13630-2:2021, there shall be no ignition, nor evidence of chemical decomposition.

prEN 13630-1:2021 (E)**5.2 Resistance to water**

When submitted to the test described in prEN 13630-8:2021 and tested in accordance with prEN 13630-12:2021, the burning duration shall be the burning duration claimed by the manufacturer $\pm 10\%$ for both the confined test and the unconfined test.

5.3 Burning duration

When tested in accordance with prEN 13630-12:2021, the burning duration of each of the five test samples shall be within $\pm 10\%$ of the value given by the manufacturer for both the confined test and the unconfined test.

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Annex ZA (informative)

Relationship between this European Standard and the essential safety 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

This European Standard has been prepared under a standardization request M/562 annexed to Commission Implementing Decision C(2019)6634 final as regards explosives for civil uses to provide one voluntary means of conforming to essential safety requirements of Directive 2014/28/EU relating to the making available on the market and supervision of explosives for civil uses.

Once this standard is cited in the Official Journal of the European Union (OJEU), under Directive 2014/28/EU, compliance with the normative clauses of this standard given in Table ZA.1 confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential safety requirements of that Directive 2014/28/EU, and associated EFTA regulations.

Table ZA.1 — Correspondence between this European Standard and Directive 2014/28/EU

Essential Safety Requirements of Directive 2014/28/EU Annex II	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
I.1.	4.2, 4.3, 4.4, 4.5 and 4.6	For detonating cords only.
I.2.	4.6, 4.7, 4.8 and 4.10 5.2 and 5.3	Sub-clauses 4.2 to 4.6 for detonating cords. Sub-clauses 5.2 and 5.3 for safety fuses.
I.3.	Not under the scope of this document	Provision of information on environmentally friendly disposal can be required by national legislation.
II.1.(a)	Not under the scope of this document	
II.1.(b)	4.1 5.1	The physical and chemical stabilities are tested as temperature can trigger or accelerate reactions of decomposition. Sub-clause 4.1 for detonating cords. Sub-clause 5.1 for safety fuses.
II.1.(c)	4.2, 4.3 and 4.4	Sub-clauses 4.2 and 4.4 for friction sensitiveness. Sub-clause 4.3 for impact sensitiveness.
II.1.(d)	4.1 5.1	The physical and chemical stabilities are tested as temperature can trigger or accelerate reactions of decomposition. Sub-clause 4.1 for detonating cords. Sub-clause 5.1 for safety fuses.

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Essential Safety Requirements of Directive 2014/28/EU Annex II	Clause(s)/ sub-clause(s) of this EN	Remarks/Notes
II.1.(e)	Not under the scope of this document	
II.1.(f)	4.7 5.2	Sub-clause 4.7 for detonating cords. Sub-clause 5.2 for safety fuses.
II.1.(g)	Not under the scope of this document	For detonating cords only.
II.1.(h)	Not under the scope of this document	For detonating cords only.
II.1.(i)	4.2 and 4.3	See prEN 13857-3:2021.
II.1.(j)	4.4, 4.5, 4.6 and 4.8	See prEN 13857-3:2021.
II.1.(k)	Not under the scope of this document	For detonating cords only. The reliability of initiation is important to prevent misfire of the detonating cord with regards to the intended use defined by the manufacturer.
II.1.(l)	Not under the scope of this document	
II.1.(m)	4.6	
II.2.	4.10	All tests have been designed to match as closely as possible the conditions of use.
II.3.2.(a)	4.3, 4.4 and 4.5	For detonating cords only.
II.3.2.(b)	5.3	For safety fuses only.
II.3.2.(c)	4.6, 4.8 and 4.9	For detonating cords only.

WARNING 1 — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

WARNING 2 — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.