SLOVENSKI STANDARD

SIST EN 13630-9:2004

01-september-2004

Eksplozivi za civilno uporabo - Detonacijske in poļasi goreļe vģigalne vrvice - 9. del: Ugotavljanje prenosa detonacije od detonacijske vrvice do detonacijske vrvice

Explosives for civil uses - Detonating cords and safety fuses - Part 9: Determination of transmission of detonation from detonating cord to detonating cord

Explosivstoffe für zivile Zwecke - Sprengschnüre und Sicherheitsanzündschnüre - Teil 9: Bestimmung der Detonationsübertragung von Sprengschnur zu Sprengschnur

Explosifs a usage civil - Poudres propulsives et propergols pour autopropulsion - Partie 9: Détermination de la transmission de la détonation de cordeau détonant a cordeau détonant

Ta slovenski standard je istoveten z: **EN 13630-9:2004**

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Explosives for civil uses - Detonating cords and safety fuses - Part 9: Determination of transmission of detonation from detonating cord to detonating cord

Explosifs à usage civil - Poudres propulsives et propergols pour autopropulsion - Partie 9: Détermination de la transmission de la détonation de cordeau détonant à cordeau détonant

Explosivstoffe für zivile Zwecke - Sprengschnüre und Sicherheitsanzündschnüre - Teil 9: Bestimmung der Detonationsübertragung von Sprengschnur zu Sprengschnur

This European Standard was approved by CEN on 2 January 2004.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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Contents

Foreword

This document (EN 13630-9:2004) has been prepared by Technical Committee CEN/TC 321 "Explosives for civil uses", the Secretariat of which is held by AENOR.

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 November 2004, and conflicting national standards shall be withdrawn at the latest by November 2004.

Annex A is informative.

This European Standard has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For the relationship with EU Directive(s), see informative annex ZA, which is an integral part of this standard.

This European Standard is one of a series of standards with the generic title Explosives for civil uses – Detonating cords and safety fuses. The other parts of this series are listed below:

EN 13630-1	Requirements.
EN 13630-2	Determination of thermal stability of detonating cords and safety fuses.
EN 13630-3	Determination of sensitiveness to friction of the core of detonating cords.
EN 13630-4	Determination of sensitiveness to impact of detonating cords.
EN 13630-5	Determination of resistance to abrasion of detonating cords.
EN 13630-6	Determination of resistance to tension of detonating cords.
EN 13630-7	Determination of reliability of initiation of detonating cords.
EN 13630-8	Determination of resistance to water of detonating cords and safety fuses.
prEN 13630-10	Determination of initiating capability of detonating cords.
EN 13630-11	Determination of velocity of detonation of detonating cords.
EN 13630-12	Determination of burning duration of safety fuses.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This European Standard specifies a method of verifying whether a flexible plastic-coated detonating cord or a flexible fibrous-overbraided detonating cord, for civil use, can be initiated by a flexible plastic-coated detonating cord or a flexible fibrous-overbraided detonating cord.

NOTE The initiating capability of a donor cord is defined by the equivalent initiating capability as described in prEN 13630-10.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

EN 13763-15, *Explosives for civil uses- Detonators and relays- Part 15: Determination of equivalent initiating capability.*

EN 13857-1:2003, *Explosives for civil uses - Part 1: Terminology.*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025: 1999).*

3 Terms and definitions

For the purposes of this European Standard, the terms and definitions given in EN 13857-1:2003, and the following apply.

3.1
acceptor cord
detonating cord receiving a stimulus from another detonating cord.

3.2
donor cord
detonating cord supplying a stimulus to another detonating cord.

4 Apparatus

4.1 Means of verifying detonation of the acceptor cord

For example witness plates of aluminium or wood, ionisation pins or detonation velocity measurement.

4.2 Detonator

A detonator of equivalent initiating capability as specified by the manufacturer of the donor cord in terms of EN 13763-15 shall be used to initiate the donor cord.

4.3 Donor cord

A detonating cord of initiating capability as specified by the manufacturer of the acceptor cord in terms of prEN 13630-10 shall be used to initiate the acceptor cord.

5 Test pieces

For each method of connecton specified by the manufacturer of the acceptor cord select five acceptor cords of the appropriate length.

NOTE The appropriate length of the acceptor cord is the length needed to make any connection plus a minimum of 500 mm.

6 Procedure

The transmission of detonation from donor cord to acceptor cord is tested by connecting the detonating cords according to the method(s) of connection specified by the manufacturer of the acceptor cord.

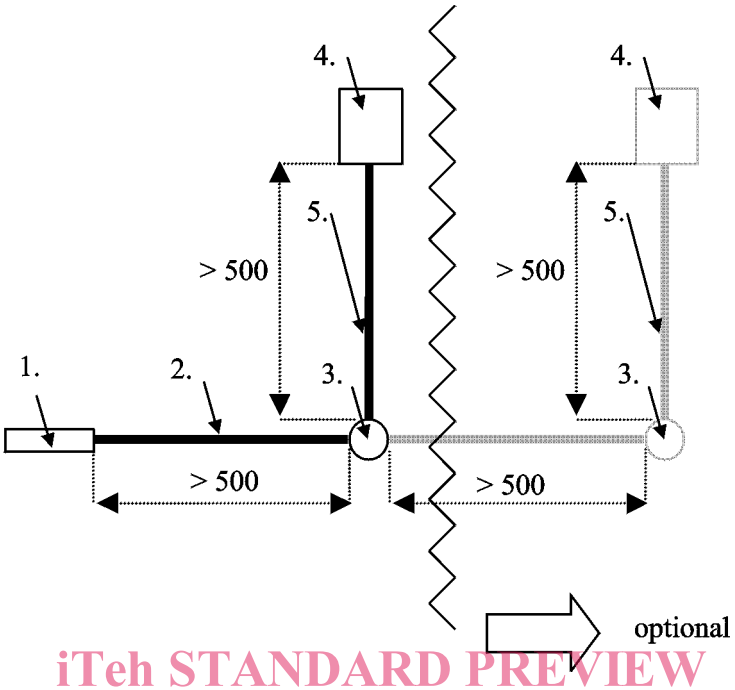
The number of donor cords shall be one or five, depending on the test arrangement.

For each method of connection cut the pieces of donor cord to such a length that the distance between the detonator and the first connection with an acceptor cord is at least 500 mm. When more than one acceptor cord is connected to the donor card, the distance between each connection to the donor cord shall be at least 500 mm. The acceptor cord shall have a minimum distance of 500 mm between the connection to the donor cord and the mean to verify detonation (see Figure 1).

Connect the acceptor cord(s) to the donor cord(s) according to the method(s) of connection specified by the manufacturer of the acceptor cord.

Connect the means of verifying detonation to the acceptor cord(s) at a distance of at least 500 mm from the connection to the donor cord.

Dimensions in millimetres



Key

1 Detonator
2 Donor cord
3 Connection between donor cord and acceptor cord
4 Means to verify detonation
5 Acceptor cord

Figure 1 - Example of test arrangement

Connect the detonator to the donor cord at a distance of at least 500 mm from the (first) connection.

Fire the detonator. Check the detonation of the acceptor cord and record the result. Test five acceptor cords. More than one acceptor cord may be connected to the donor cord and tested at the same time.

7 Test report

The test report shall conform to EN ISO/IEC 17025. The following information shall be given:

a) reference to this standard;

b) the number of acceptor cords connected to each donor card;

c) method used to verify the detonation of the acceptor cord;

d) type of donor cord used;

e) whether each acceptor cord detonated completely;

f) type of detonator used.

Annex A
(informative)

Range of applicability of the test method

Range of applicability of the test method: -30 °C to +80 °C.