

**Tsiviilkäibes olevad lõhkeained.
Brisantlõhkeained. Osa 2: Lõhkeainete
kuumatundlikkuse määramine**

Explosives for civil uses - High explosives - Part 2:
Determination of thermal stability of explosives

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 13631-2:2002 sisaldab Euroopa standardi EN 13631-2:2002 ingliskeelset teksti. Käesolev dokument on jõustatud 18.10.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 13631-2:2002 consists of the English text of the European standard EN 13631-2:2002. This document is endorsed on 18.10.2002 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.
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Käsitlusala: This European Standard specifies a method to assess the stability of explosives by subjecting them to elevated thermal conditions.	Scope: This European Standard specifies a method to assess the stability of explosives by subjecting them to elevated thermal conditions.
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ICS 71.100.30

Võtmesõnad: detonat, explosives, fuels, heat, hydrostatic pressure, magazines, materials testing, mining, pressure resistance, propellants, resistance, rocket propellant, specimen preparation, stability, testing, thermal effect, thermal properties of materials, thermodynamic pr

ICS 71.100.30

English version

Explosives for civil uses - High explosives - Part 2: Determination of thermal stability of explosives

Explosifs à usage civil - Explosifs - Partie 2: Détermination
de la stabilité thermique des explosifs

Explosivstoffe für zivile Zwecke - Sprengstoffe - Teil 2:
Bestimmung der thermischen Stabilität von Explosivstoffen

This European Standard was approved by CEN on 11 July 2002.

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 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 Management Centre has the same status as the official versions.

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



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Foreword

This document (EN 13631-2:2002) 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 March 2003, and conflicting national standards shall be withdrawn at the latest by March 2003.

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

This European Standard is one of a series of standards on *Explosives for civil uses – High explosives*. The other parts of this series are:

prEN 13631-1	<i>Part 1: Requirements.</i>
prEN 13631-3	<i>Part 3: Determination of sensitiveness to friction of explosives.</i>
EN 13631-4	<i>Part 4: Determination of sensitiveness to impact of explosives.</i>
EN 13631-5	<i>Part 5: Determination of resistance to water.</i>
EN 13631-6	<i>Part 6: Determination of resistance to hydrostatic pressure.</i>
prEN 13631-7	<i>Part 7: Determination of safety and reliability at extreme temperatures.</i>
prEN 13631-10	<i>Part 10: Method for the verification of the means of initiation.</i>
prEN 13631-11	<i>Part 11: Determination of transmission of detonation.</i>
prEN 13631-12	<i>Part 12: Determination of the initiating capability of boosters.</i>
prEN 13631-13	<i>Part 13: Method for the determination of density.</i>
prEN 13631-14	<i>Part 14: Method for the determination of velocity of detonation.</i>
prEN 13631-15	<i>Part 15: Calculation of thermodynamic properties.</i>
prEN 13631-16	<i>Part 16: Detection and measurement of toxic gases.</i>

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

1 Scope

This European Standard specifies a method to assess the stability of explosives by subjecting them to elevated thermal conditions.

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 13857-1:2001, *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 prEN 13857-1:2001 and the following definition apply.

3.1 self-heating

temperature rise at least 3 °C above the temperature of the reference substance

4 Apparatus

4.1 Heating chamber, capable of being controlled at (75 ± 2) °C.

NOTE The heating chamber should have dual thermostats or some other means of protection against thermal run-away if the control thermostat malfunctions. Preferably, the chamber should be isolated and capable of remote operation. It should also be equipped with a ventilation system. Electrical equipment should be safe for use with explosives.

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

4.3 Three thermocouples, of appropriate type, which are inert to the substances under test. If the sheath is not inert with respect to the substance under test, an inert envelope shall be used with a thermal resistance as low as possible.

4.4 Temperature recording system, capable of measuring temperature to ± 1 °C.

4.5 Two glass tubes, with a flat bottom, inner diameter $(50,5 \pm 0,5)$ mm, approximately 150 mm long and a thickness of approximately 3 mm. For its closure, the tube containing the substance under test shall be equipped with a gas-proof device with a weak part forming a rupture disk calibrated at a static gauge pressure of 60 kPa or a continuous pressure measurement device. An example of a closing device is shown in Figure 1. A means of venting the device should be provided.

4.6 Reference material, with the same physical state as that of the substance to be tested, stable at the test temperature (for example, sand or alumina for a granular solid, a polytetrafluoroethylene (PTFE) block for a solid rocket propellant and water for a liquid). A sample of 300 g is sufficient.