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TSIVIILKÄIBES OLEVAD LÕHKEAINED. LÕHKEAINED LÕHKETÖÖDEKS, VÕIMENDUSLAENGUD JA PLAHVATUSOHTLIKUD AINED. OSA 3: LÕHKEAINETE HÕÕRDETUNDLIKKUSE MÄÄRAMINE

Explosives for civil uses - Explosives for blasting, boosters and explosive substances - Part 3: Verification of the insensitiveness to friction of explosives for blasting and explosive substances

EESTI STANDARDIMIS- JA AKREDITEERIMISKESKUS
ESTONIAN CENTRE FOR STANDARDISATION AND ACCREDITATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 13631-3:2025 sisaldab Euroopa standardi EN 13631-3:2025 ingliskeelset teksti.	This Estonian standard EVS-EN 13631-3:2025 consists of the English text of the European standard EN 13631-3:2025.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 01.10.2025.	Date of Availability of the European standard is 01.10.2025.
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ICS 71.100.30

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13631-3

October 2025

ICS 71.100.30

Supersedes EN 13631-3:2004

English Version

Explosives for civil uses - Explosives for blasting, boosters and explosive substances - Part 3: Verification of the insensitiveness to friction of explosives for blasting and explosive substances

Explosifs à usage civil - Explosifs de mine, renforçateurs, et substances explosives - Partie 3 : Vérification de la insensibilité au frottement des explosifs de mine et substances explosives

Explosivstoffe für zivile Zwecke - Sprengstoffe, Verstärkungsladungen und Explosivstoffe - Teil 3: Überprüfung der Reibunempfindlichkeit von Sprengstoffen und Explosivstoffen

This European Standard was approved by CEN on 29 September 2025.

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Ref. No. EN 13631-3:2025 E

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Contents

Page

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European foreword

This document (EN 13631-3:2025) 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 13631-3:2004.

EN 13631-3:2025 includes the following significant technical changes with respect to EN 13631-3:2004:

a) the document title has been changed from “Explosives for civil uses — High explosives — Part 3: Determination of sensitiveness to friction of explosives” to “Explosives for civil uses — Explosives for blasting, boosters and explosive substances — Part 3: Verification of the insensitiveness to friction of explosives for blasting and explosive substances”;

b) the general concept of the document has been modified so that the sensitiveness to friction is no longer determined but the insensitiveness to a specific friction load is verified;

c) the Scope has been revised to clarify the covered and not covered explosives;

d) the normative references have been updated;

e) the terminology entries 3.1 and 3.2 have been removed;

f) the Clause 4 “Principle” has been updated;

g) the Clause “Apparatus” has been updated and Table 1 “Possible loads for the loading device” removed;

h) the preparation of the test sample has been simplified;

i) the Clause “Procedure” has been updated;

j) the Clause 8 “Expression of test results” has been added;

k) the Clause “Test report” does no longer require conformity with EN ISO/IEC 17025 and the information to be provided has been updated;

l) the former Annex A “Range of applicability of the test method” has been removed;

m) the Annex ZA has been updated;

n) the Bibliography has been added and lists, e.g. 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.

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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 13631 series, published under the general title *Explosives for civil uses — Explosives for blasting, boosters and explosive substances*, 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 organisations 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 test method for the verification of the insensitiveness to friction of explosives for blasting and explosive substances.

This document is also applicable to black powder used for blasting.

This document is not applicable to boosters.

This document is not applicable to compact solid explosives.

This document is not applicable to liquid explosives.

This document also applies to solid gun propellants, solid rocket propellants, black powder used as propellants, for safety fuse or for pyrotechnics and powder cakes as covered by EN 13938-1:2025.

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 13631-1:2025, *Explosives for civil uses — Explosives for blasting, boosters and explosive substances — Part 1: Requirements*

EN 13857-1:2025, *Explosives for civil uses — Part 1: Vocabulary*

EN 13938-1:2025, *Explosives for civil uses — Propellants and rocket propellants — Part 1: Requirements*

EN 60672-3:1997, *Ceramic and glass-insulating materials — Part 3: Specifications for individual materials*

EN ISO 21920-2:2022, *Geometrical product specifications (GPS) — Surface texture: Profile — Part 2: Terms, definitions and surface texture parameters (ISO 21920-2:2021, Corrected version 2022-06)*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13857-1:2025 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org

4 Principle

Knowledge of the insensitiveness to friction of explosives is of importance to address risks during handling and to prevent inadvertent initiation or ignition.

The insensitiveness to friction is determined by moving a sample of the explosive lying on a porcelain plate under a porcelain peg while a load is acting on the peg. The sample experiences friction due to the roughness of the surface of the plate and the peg. As the friction is applied, it is observed whether the sample is initiated or ignited.

NOTE The test method presented in this document is based on the friction sensitiveness test method described in the United Nations Manual of Tests and Criteria and in Council Regulation (EC) No 440/2008, Part A.14. For example, in order to test the insensitiveness to friction, it is necessary to subject the sample to a friction load of 72 N to match the sensitiveness level of 80 N in the UN Manual.

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