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Explosives for civil uses - Propellants and rocket propellants - Part 4: Determination of the burning rate of solid gun propellants and black powder

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/26

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EUROPEAN STANDARD

EN 13938-4

NORME EUROPÉENNE

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Supersedes EN 13938-4:2003

English Version

Explosives for civil uses - Propellants and rocket propellants - Part 4: Determination of the burning rate of solid gun propellants and black powder

Explosifs à usage civil - Poudres propulsives et propergols pour propulseurs - Partie 4 : Détermination de la vitesse de combustion des poudres pour armes et de la poudre noire

Explosivstoffe für zivile Zwecke - Treibladungspulver und Raketentreibstoffe - Teil 4: Bestimmung der Brenngeschwindigkeit bei Umgebungsbedingungen

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

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

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

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EN 13938-4:2025 (E)

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European foreword

This document (EN 13938-4:2025) 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of an identical text or by endorsement, at the latest by April 2026, and conflicting national standards shall be withdrawn at the latest by April 2026.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 13938-4:2003.

EN 13938-4:2025 includes the following significant technical changes with respect to EN 13938-4:2003:

- a) the document title has been changed from “Part 4: Determination of burning rate under ambient conditions” to “Part 4: Determination of the burning rate of solid gun propellants and black powder”;
- b) the Scope it has been revised so that the test method is no longer limited to a particle size ≤ 8 mm;
- c) the normative references have been updated;
- d) the terminology entry 3.1 has been removed;
- e) the Clause 4 “Principle” has been revised;
- f) the Clause 5 “Apparatus” has been revised and as means of ignition an open flame, a hot wire or a safety fuse is now specified;
- g) the Clause 6 “Preparation of test sample” now contains the specification of the volume of the test sample needed;
- h) the Clause 7 “Procedure” has been revised and now contains two subclauses, “Testing” and “Calculation”, the latter one containing the specification of that moved here from Clause 8
- i) the Clause 8 “Expression of results” has been revised;
- j) the Clause “Test report” does no longer require conformity with EN ISO/IEC 17025 and the information to be provided has been revised in accordance with the revised procedure;
- k) the former Annex A “Range of applicability of the test method” has been removed;
- l) the Annex ZA has been updated;
- m) the Bibliography has been added and lists 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.

For the relationship with EU Legislation, see informative Annex ZA, which is an integral part of this document.

EN 13938-4:2025 (E)

A list of all parts in the EN 13938 series, published under the general title *Explosives for civil uses — Propellants and rocket propellants*, 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.

1 Scope

This document specifies a method for the determination of the burning rate for solid gun propellants and black powder.

This document does not apply to solid rocket propellants or powder cakes.

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 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

koniec náhľadu – text ďalej pokračuje v platenej verzii STN