

STN	Výbušniny na civilné použitie Streliviny a pohonné hmoty Časť 1: Požiadavky	STN EN 13938-1
		66 8102

Explosives for civil uses - Propellants and rocket propellants - Part 1: Requirements

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

Obsahuje: EN 13938-1:2025

Oznámením tejto normy sa ruší
STN EN 13938-1 (66 8102) z decembra 2005
Spolu s STN EN 13630-1, STN EN 13763-1 a STN EN 13631-1 ruší
STN EN 13857-3 (66 8003) z decembra 2003

141717

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 13938-1

October 2025

ICS 71.100.30

Supersedes EN 13857-3:2002, EN 13938-1:2004

English Version

**Explosives for civil uses - Propellants and rocket
propellants - Part 1: Requirements**

Explosifs à usage civil - Poudres propulsives et
propérgols pour propulseurs - Partie 1 : Exigences

Explosivstoffe für zivile Zwecke - Treibladungspulver
und Raketentreibstoffe - Teil 1: Anforderungen

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.

CEN members are the national standards bodies of 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 United Kingdom.



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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

	Page
European foreword	4
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 Requirements for solid gun propellants	7
4.1 Information to be provided for solid gun propellants	7
4.1.1 Temperature of use.....	7
4.1.2 Storage conditions.....	7
4.1.3 Density	7
4.2 Requirements on properties of solid gun propellants	7
4.2.1 Resistance to electrostatic discharge	7
4.2.2 Deflagration to detonation transition (DDT).....	7
4.2.3 Burning rate.....	7
4.2.4 Thermal stability.....	7
4.2.5 Insensitiveness to friction	7
4.2.6 Insensitiveness to impact	7
4.2.7 Density	8
5 Requirements for solid rocket propellants	8
5.1 Information to be provided for solid rocket propellants.....	8
5.1.1 Temperature of use.....	8
5.1.2 Storage conditions.....	8
5.1.3 Density	8
5.1.4 Means of ignition.....	8
5.2 Requirements on properties of solid rocket propellants.....	8
5.2.1 Voids and fissures of small rocket motors containing solid rocket propellants	8
5.2.2 Thermal stability.....	8
5.2.3 Insensitiveness to friction	8
5.2.4 Insensitiveness to impact	8
6 Requirements for black powder used as propellant, for pyrotechnic articles or for safety fuses	9
6.1 Information to be provided for black powder used as propellant	9
6.1.1 Temperature of use.....	9
6.1.2 Storage conditions.....	9
6.1.3 Burning rate.....	9
6.1.4 Density	9
6.2 Requirements on properties of black powder used as propellant	9
6.2.1 Burning rate.....	9
6.2.2 Thermal stability.....	9
6.2.3 Insensitiveness to friction	9
6.2.4 Insensitiveness to impact	9
6.2.5 Density	9
7 Requirements for powder cakes	10
7.1 Information to be provided for powder cakes	10
7.1.1 Temperature of use.....	10

7.1.2 Storage conditions.....	10
7.2 Requirements on properties of powder cakes.....	10
7.2.1 Thermal stability	10
7.2.2 Insensitiveness to friction	10
7.2.3 Insensitiveness to impact	10
Annex ZA (informative) Relationship between this European Standard and the essential 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.....	11
Bibliography	15

EN 13938-1:2025 (E)**European foreword**

This document (EN 13938-1:2025) 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 will supersede EN 13938-1:2004. In addition, together with EN 13630-1:2025, EN 13631-1:2025 and EN 13763-1:2025, this document will supersede EN 13857-3:2002.

EN 13938-1:2025 includes the following significant technical changes with respect to EN 13938-1:2004:

- a) the Scope has been revised enlarged to clarify the covered explosives;
- b) the normative references have been updated;
- c) the terminology entry 3.1 has been removed;
- d) the former Clause 4 "Requirements" has been replaced by separate clauses specifying the requirements for each explosive covered in this document;
- e) the requirements on information to be provided for solid gun propellants, solid rocket propellants, black powder used as propellant and powder cakes have been added to this document as new Sub-Clauses 4.1, 5.1, 6.1 and 7.1; these requirements have been moved to this document in a revised form from EN 13857-3:2002;
- f) the requirements on the properties of the explosives covered in this document have been revised to match the expression of the results in the corresponding test method standards;
- g) the requirement regarding the integrity of inhibitor coatings for solid gun propellants has been removed;
- h) the Annex ZA has been updated;
- i) the Bibliography has been updated.

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.

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.

EN 13938-1:2025 (E)

1 Scope

This document specifies requirements for propellants and rocket propellants. It is applicable to solid gun propellants and solid rocket propellants.

This document also specifies requirements for powder cakes.

This document is applicable to black powder when used as propellant, for pyrotechnic articles or for safety fuses.

This document does not apply to black powder used for blasting; for requirements for black powder used for blasting, see EN 13631-1:2025.

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 13631-2:2025, *Explosives for civil uses — Explosives for blasting, boosters and explosive substances — Part 2: Verification of thermal stability*

EN 13631-3:2025, *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*

EN 13631-4:2025, *Explosives for civil uses — Explosives for blasting, boosters and explosive substances — Part 4: Verification of the insensitiveness to impact of explosives for blasting and explosive substances*

EN 13631-13:2025, *Explosives for civil uses — Explosives for blasting, boosters and explosive substances — Part 13: Verification of density*

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

EN 13938-2:2025, *Explosives for civil uses — Propellants and rocket propellants — Part 2: Verification of the resistance of solid gun propellants to electrostatic discharge*

EN 13938-3:2025, *Explosives for civil uses — Propellants and rocket propellants — Part 3: Verification of deflagration to detonation transition of solid gun propellants*

EN 13938-4:2025, *Explosives for civil uses — Propellants and rocket propellants — Part 4: Determination of burning rate of solid gun propellants and black powder*

EN 13938-5:2025, *Explosives for civil uses — Propellants and rocket propellants — Part 5: Verification of safe functioning of solid rocket propellants used in small rocket motors*

koniec náhľadu – text ďalej pokračuje v platnej verzii STN