



SLOVENSKI STANDARD

oSIST prEN 15947-2:2018

01-oktober-2018

Pirotehnični izdelki - Ognjemetni izdelki, kategorije F1, F2 in F3 - 2. del: Kategorije in vrste ognjemetnih izdelkov

Pyrotechnic articles - Fireworks, Categories F1, F2 and F3 - Part 2: Categories and types of firework

Pyrotechnische Gegenstände - Feuerwerkskörper, Kategorien F1, F2 und F3 - Teil 2: Kategorien und Feuerwerkstypen

Articles pyrotechniques - Artifices de divertissement, Catégories F1, F2 et F3 - Partie 2: Catégories et types d'artifices de divertissement

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Ta slovenski standard je istoveten z: **prEN 15947-2:2018**

ICS:

71.100.30	Eksplzivni. Pirotehnika in ognjemeti	Explosives. Pyrotechnics and fireworks
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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

DRAFT
prEN 15947-2

September 2018

ICS 71.100.30

Will supersede EN 15947-2:2015

English Version

Pyrotechnic articles - Fireworks, Categories F1, F2 and F3 - Part 2: Categories and types of firework

Articles pyrotechniques - Artifices de divertissement,
Catégories F1, F2 et F3 - Partie 2: Catégories et types
d'artifices de divertissement

Pyrotechnische Gegenstände - Feuerwerkskörper,
Kategorien F1, F2 und F3 - Teil 2: Kategorien und
Feuerwerkstypen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 212.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.



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

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

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European foreword

This document (prEN 15947-2:2018) has been prepared by Technical Committee CEN/TC 212 "Pyrotechnic articles", the secretariat of which is held by NEN.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 15947-2:2015.

In comparison with the previous edition, the following technical modifications have been made:

- safety distances have been added to the different firework categories;
- preliminary effect has been added to the brief description of banger and flash banger in Table 2;
- a new type, senko-hanabi has been added to the list of types of fireworks in Table 2;
- the brief descriptions of shot tube and mine have been changed in Table 2;
- the brief description of Bengal flame in Table 2 has been changed in order to allow them to be held in the hand;
- the brief description of throwdown has been changed in Table 2;
- a new type, report rocket has been added to the list of types of fireworks in Table 2.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential safety 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 the series of standards as listed below:

- EN 15947-1, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 1: Terminology*
- EN 15947-2, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 2: Categories and types of firework*
- EN 15947-3, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 3: Minimum labelling requirements*
- EN 15947-4, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 4: Test methods*
- EN 15947-5, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 5: Requirements for construction and performance*

prEN 15947-2:2018 (E)**1 Scope**

This document establishes a system for dividing fireworks into categories and types. It is applicable to fireworks in categories F1, F2 and F3.

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.

prEN 15947-1:2018, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 1: Terminology*

prEN 15947-3:2018, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 3: Minimum labelling requirements*

prEN 15947-5:2018, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 5: Requirements for construction and performance*

prEN 16265:2018, *Pyrotechnic articles — Other pyrotechnic articles — Ignition devices*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in prEN 15947-1:2018 apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

4 Categories

Fireworks are subdivided into categories as follows:

- **category F1:** fireworks which present a very low hazard and negligible noise level and which are intended for use in confined areas, including fireworks which are intended for use inside domestic buildings. The safety distance for category F1 is 1 m or, where appropriate, less;
- **category F2:** fireworks which present a low hazard and low noise level and which are intended for outdoor use in confined areas. The safety distance for category F2 is 8 m, or, where appropriate, less;
- **category F3:** fireworks which present a medium hazard, which are intended for outdoor use in large open areas and whose noise level is not harmful to human health. The safety distance for category F3 is 15 m, or, where appropriate, less.

5 Category F1

5.1 List of articles which fall into category F1

The following articles (i.e. types of firework) fall into category F1, when meeting the requirements in prEN 15947-3:2018 and prEN 15947-5:2018 for category F1:

- Bengal flames;
- Bengal matches;
- Bengal sticks;
- Christmas crackers;
- crackling granules;
- flash pellets;
- fountains;
- ground spinners;
- hand-held sparklers;
- non-hand-held sparklers;
- novelty matches;
- party poppers;
- senko-hanabi
- serpents;
- snaps;
- table bombs;
- throwdowns.

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5.2 List of articles which do not fall into category F1

Articles (i.e. types of firework) that do not fall into category F1 are, for example:

- aerial wheels;
- bangers;
- batteries;
- batteries requiring external support;
- combinations;

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- combinations requiring external support;
- compound fireworks;
- double bangers;
- flash bangers;
- ground movers;
- jumping crackers;
- jumping ground spinners;
- mines;
- mini rockets;
- report rockets;
- rockets;
- Roman candles;
- shot tubes;
- spinners;
- wheels.

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5.3 Procedure to determine whether an article falls into category F1

This procedure shall be used when a new article is presented, which does not fall into one of the types listed in 5.1.

The following questions in Table 1 shall be answered in the order given. To fall into category F1, an article shall have a negative answer to all the questions. If one answer is “Yes” the article does not fall into category F1.

Table 1 — Questions for articles that are not in category F1

Question	Answer
1) Is the article in the list of excluded articles (see 5.2)?	Yes → not in category F1
2) Does the article resemble a toy or food?	Yes → not in category F1
3) Does the sound pressure level exceed 120 dB(AI _{max}) at the safety distance of category F1 fireworks?	Yes → not in category F1
4) Is debris, burning, or incandescent matter projected laterally more than the safety distance of category F1 fireworks?	Yes → not in category F1
5) Does the article, or parts of it, move outside the safety distance of category F1 fireworks from the testing point?	Yes → not in category F1
6) Does the article lift from the ground by more than 0,5 m?	Yes → not in category F1

6 Types of firework

Fireworks are further subdivided into various types, as described in Table 2.

Table 2 — Types of firework

Type name	Brief description	Principal effect(s)
aerial wheel soucoupe volante Steigende Krone	tubes containing propellant charges and spark-, flame- and/or noise-producing pyrotechnic compositions, the tubes being fixed to a supporting structure	rotation and ascent, with emission of sparks and flames, producing a visual and/or aural effect in the air
banger pétard à poudre noire Knallkörper	non-metallic case containing black powder as report charge, with or without a preliminary effect (e.g. whistling, flames, sparks, crackling or combinations thereof except report)	report
Type name	Brief description	Principal effect(s)
Battery batterie Batterie	assembly including several elements, each of the same type and corresponding to one of the types of firework listed in this part of EN 15947 and in accordance with prEN 15947-5:2018, 4.3, with one or two points of ignition, which does not require external support	as for the individual elements
battery requiring external support batterie nécessitant un support externe Batterie die externe Stabilisierung erfordert	assembly including several elements, each of the same type and corresponding to one of the types of firework listed in this part of EN 15947 and in accordance with prEN 15947-5:2018, 4.3, with one or two points of ignition, which requires external support	as for the individual elements

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Bengal flame feu de Bengale Bengalfeuer	tube containing slow-burning pyrotechnic composition designed to be placed on the ground, or to be fixed in the ground, or to be fixed to a support, or to be held in the hand	emission of coloured flame
Bengal match allumette Bengale Bengalholz	short wooden stick partially coated (along one end) with slow-burning pyrotechnic composition, with a dot of friction-sensitive pyrotechnic composition at the tip, and designed to be held in the hand	emission of coloured flame and sparks
Bengal stick baguette Bengale Bengalfackel	wooden stick partially coated (along one end) with slow-burning pyrotechnic composition and designed to be held in the hand	emission of coloured flame and sparks
Christmas cracker christmas cracker Knallbonbon	paper or foil tube, crimped at each end, enclosing novelties and with one or more snaps running along the length of the tube	report when pulled apart and release of the novelties
combination combinaison Kombination	assembly including several elements, not all of the same type, each corresponding to one of the types of firework listed in this part of EN 15947 and in accordance with prEN 15947-5:2018, 4.3, with one or two points of ignition, which does not require external support	as for the individual elements
combination requiring external support combinaison nécessitant un support externe Kombination die externe Stabilisierung erfordert	assembly including several elements, not all of the same type, each corresponding to one of the types of firework listed in this part of EN 15947 and in accordance with prEN 15947-5:2018, 4.3, with one or two points of ignition, which requires external support	as for the individual elements
Type name	Brief description	Principal effect(s)
compound firework composition d'artifices Verbundfeuerwerk	assembly including several separately CE marked fireworks complying with prEN 15947:2018, which are securely fixed on the same base, and connected together by linking the protruding and reserve fuses of each firework, or with separately CE marked pyrotechnic cords according to prEN 16265:2018, or a mixture of both, with one or two points of ignition, which does not require external support	as for the individual articles
crackling granules crépitant Knatterartikel	bag, or other container, enclosing small granules of pyrotechnic composition	crackling