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BS EN 15947-5:2015



BSI Standards Publication

Pyrotechnic articles — Fireworks, Categories F1, F2, and F3

Part 5: Requirements for construction and performance

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This British Standard is the UK implementation of EN 15947-5:2015. It supersedes BS EN 15947-5:2010 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CII/47, Pyrotechnic articles.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Articles pyrotechniques - Artifices de divertissement,
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construction et de performances

Pyrotechnische Gegenstände - Feuerwerkskörper,
Kategorien F1, F2 und F3 - Teil 5: Anforderungen an
Konstruktion und Funktion

This European Standard was approved by CEN on 26 September 2015.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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Contents	Page
European foreword.....	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions.....	6
4 Construction.....	6
4.1 Construction materials (type test and batch test).....	6
4.1.1 General requirements.....	6
4.1.2 Specific requirements.....	6
4.2 Length of handle (type test and batch test).....	7
4.3 Permitted elements in batteries, batteries requiring external support, combinations and combinations requiring external support (type test and batch test).....	8
4.4 Dimensions for mini rockets (type test and batch test).....	8
4.5 Specific requirements for compound firework (type and batch test).....	8
5 Pyrotechnic composition (type test).....	9
6 Means of ignition.....	11
6.1 Permitted means of ignition (type test and batch test).....	11
6.2 Protection of initial fuse (type test and batch test).....	13
6.3 Attachment of means of ignition (type test and batch test).....	13
6.4 Fuse requirements (type test and batch test).....	14
6.4.1 General requirements.....	14
6.4.2 Specific requirements.....	14
7 Performance.....	14
7.1 Properties to be checked before functioning tests.....	14
7.1.1 Loose pyrotechnic composition after mechanical conditioning (type test).....	14
7.1.2 Integrity (type test and batch test).....	14
7.1.3 Stabilization of flight (type test and batch test).....	15
7.1.4 Other requirements (type test).....	15
7.2 Properties to be checked during functioning tests (type test and batch test).....	16
7.2.1 Principal effects.....	16
7.2.2 Functioning.....	16
7.2.3 Angle of ascent or flight.....	16
7.2.4 Motion.....	16
7.2.5 Stability during functioning.....	16
7.2.6 Height of explosion.....	17
7.2.7 Sound pressure level.....	17
7.2.8 Explosions and other failures.....	17
7.2.9 Burning or incandescent matter.....	18
7.2.10 Extinguishing of flames.....	18
7.2.11 Projected debris.....	19
7.2.12 Burning rate of pyrotechnic composition.....	20
7.2.13 Pull-string or -strip.....	20
7.3 Properties to be checked after functioning tests (type test and batch test).....	20

This is a preview of "BS EN 15947-5:2015". [Click here to purchase the full version from the ANSI store.](#)

7.3.1	Droop	20
7.3.2	Plastics body	20
7.3.3	Rocket motor	20
7.3.4	Integrity after functioning	21
8	Primary pack or selection pack (type test and batch test)	21
9	Type testing	21
9.1	General	21
9.2	Number of items to be tested	22
9.3	Number of primary packs to be examined	23
9.4	Test report	23
10	Batch testing	23
10.1	General	23
10.2	Sampling plans	23
10.3	Unit of product	24
10.4	Nonconformities	24
10.5	Test report	25
10.6	Acceptance or rejection of a batch	26
10.6.1	Nonconforming units	26
10.6.2	Critical nonconforming units	26
10.6.3	Major nonconforming units	26
10.6.4	Minor nonconforming units	26
10.6.5	Fireworks supplied in primary packs or selection packs	26
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2013/29/EU on the harmonization of the laws of the Member States relating to the making available on the market of pyrotechnic articles		27
Bibliography		29

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European foreword

This document (EN 15947-5:2015) has been prepared by Technical Committee CEN/TC 212 "Pyrotechnic articles", the secretariat of which is held by NEN.

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 June 2016, and conflicting national standards shall be withdrawn at the latest by June 2016.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 15947-5:2010.

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.

Directive 2007/23/EC on the placing on the market of pyrotechnic articles is repealed with effect from 1 July 2015 and replaced by Directive 2013/29/EU on the harmonization of the laws of the Member States relating to the making available on the market of pyrotechnic articles. However, by way of derogation from this, point 4 of Annex I to Directive 2007/23/EC was repealed by Directive 2013/29/EU with effect from 4 July 2013 and the new ESR 4 (a), 4 (b) and 4 (c) of Directive 2013/29/EU are already in force and applicable since 4th July 2013.

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*.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1 Scope

This European Standard specifies requirements for construction, performance and primary or selection packaging of fireworks. It is applicable to fireworks in categories F1, F2 and F3 according to EN 15947-2:2015.

This European Standard does not apply for articles containing detonative explosives except for black powder or flash composition.

This European Standard does not apply for articles containing pyrotechnic composition that includes any of the following substances:

- arsenic or arsenic compounds;
- hexachlorobenzene;
- mixtures containing a mass fraction of chlorates greater than 80 %;
- mixtures of chlorates with metals;
- mixtures of chlorates with red phosphorus (except when used in Christmas crackers, party poppers or snaps);
- mixtures of chlorates with potassium hexacyanoferrate(II);
- mixtures of chlorates with sulfur (these mixtures are allowed for friction heads only);
- mixtures of chlorates with sulfides;
- lead or lead compounds;
- mercury compounds;
- white phosphorus;
- picrates or picric acid;
- potassium chlorate with a mass fraction of bromates greater than 0,15 %;
- sulfur with an acidity, expressed in mass fraction of sulphuric acid, greater than 0,002 %;
- zirconium with a particle size of less than 40 μm .

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 15947-1:2015, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 1: Terminology*

EN 15947-2:2015, *Pyrotechnic articles — Fireworks, Categories F1, F2 and F3 — Part 2: Categories and types of firework*