
Pirotehnični izdelki - Pirotehnični izdelki za gledališče

Pyrotechnic articles - Theatrical pyrotechnic articles

Pyrotechnische Gegenstände - Pyrotechnische Gegenstände für Bühne und Theater

Articles pyrotechniques - Articles pyrotechniques destinés au théâtre

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97.200.10	Gledališka, odrska in studijska oprema ter delovne postaje	Theatre, stage and studio equipment

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EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

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prEN 16256

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ICS 71.100.30

English Version

Pyrotechnic articles - Theatrical pyrotechnic articles

Articles pyrotechniques - Articles pyrotechniques
destinés au théâtre

Pyrotechnische Gegenstände - Pyrotechnische
Gegenstände für Bühne und Theater

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European foreword

This document (prEN 16256:2026) 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 16256-1:2012, EN 16256-2:2012, EN 16256-3:2012, EN 16256-4:2012 and EN 16256-5:2012.

prEN 16256:2025 includes the following significant technical changes with respect to EN 16256-1:2012, EN 16256-2:2012, EN 16256-3:2012, EN 16256-4:2012 and EN 16256-5:2012:

- Clause 3 deleted ‘Continuous effect’ and added 3.6 ‘detonation’, 3.7 ‘detonative explosion’ and 3.41-3.46 ‘effect dimensions’, ‘effect charge’, ‘bursting charge’, ‘propellant charge’, ‘type test’ and ‘batch test’;
- Clause 3.5 and 3.36 added: Note 1 to entry: Materials such as confetti etc. are not considered as effect;
- Clause 3.37 added: Note 1 to entry: There might be different safety distances for persons who are protected from the effects by protective equipment and those without protective equipment;
- Clause 4, Table 1 description and effect of ‘comet’ and ‘mine’ are revised;
- Clause 5.2, Table 2 added for comet a note: only when the pyrotechnic unit is preloaded into the firing tube (see 6.5);
- Clause 6.5 “Specific requirements for comets and mines” has been added;
- Clause 6.6 “Use of detonative explosives” and Clause 6.7 “Forbidden substances” have been revised and be brought in line with WG 2;
- Clause 8.2 “Initial fuses and electrical igniters” requirement added on conformation to EN 16265 regarding ESD test only;
- Clause 9.2.4 “Effect dimensions”: for batch test a distinction is made between articles of category T1 and articles of category T2;
- Clause 9.2.5 “Sound pressure level” requirement added for articles where the parameter B is given on the label or in the instructions for use.;
- Clause 9.2.7 “Burning or incandescent matter” added: Additionally, for articles where the parameter D is given and is not given with a “+” in the labelling, no burning or incandescent matter shall fall to the ground, see Table A.1.;
- Clause 9.2.9 “Projected debris” requirement added for articles where the parameter C is given on the label or in the instructions for use;
- Clause 9.4 “Minimum safety distances for theatrical pyrotechnic articles T1 (Type test)” requirement added for rounding up the calculated value for T1 line rockets and T1 airbursts to the next metre.;
- Clause 11.4 “Test report” added 4 items.
- Clause 12.1 “General” requirement added for batch tests;

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- Clause 12.4 “Non-conformities” Table 8: effect dimensions is extended in more detail;
- Clause 13.4 “Category, registration number, product, batch or serial number” added: product, batch or serial number;
- Clause 13.10 “Instructions for use, safety and disposal information” added the sentence: “This pyrotechnic article is for stage, film and television productions or similar use only”;
- Clause 16.2 “Indoor”; Requirement added with regard to the test area;
- Clause 18.4.2 “Procedure” the setup of the microphone of the sound level meter is better specified;
- Clause 18.17 “Use of detonative explosives” describes an extra added test for detonative explosives

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.

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1 Scope

This document defines various terms and specific requirements relating to the design, construction, performance, primary packaging and testing of theatrical pyrotechnic articles and specifies their generic types.

It defines the procedures for placing generic types, subtypes or individual items of theatrical pyrotechnic articles into the appropriate Categories, T1 or T2 and lists them.

It specifies minimum labelling requirements for the article and primary packaging and for the instructions for use. Specific test methods for theatrical pyrotechnic articles of the generic types are defined.

NOTE “Theatrical pyrotechnic article(s)” is abbreviated by “article(s)” in this document.

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 16265:2015, *Pyrotechnic articles - Other pyrotechnic articles - Ignition devices*

EN 61672-1:2013, *Electroacoustics - Sound level meters - Part 1: Specifications*

EN ISO 13385-1:2019, *Geometrical product specifications (GPS) - Dimensional measuring equipment - Part 1: Design and metrological characteristics of callipers (ISO 13385-1:2019)*

ISO 2859-1:2026, *Sampling procedures for inspection by attributes — Part 1: Sampling schemes indexed by acceptance quality limit (AQL) for lot-by-lot inspection*

ISO 6344-3:2021, *Coated abrasives — Determination and designation of grain size distribution — Part 3: Microgrit sizes P240 to P5000*

ISO 21948:2001, *Coated abrasives — Plain sheets*

ISO 22863-1:2020, *Fireworks — Test methods for determination of specific chemical substances — Part 1: General*

ISO 22863-3:2020, *Fireworks — Test methods for determination of specific chemical substances — Part 3: Lead and lead compounds by atomic absorption*

ISO 22863-4:2021, *Fireworks — Test methods for determination of specific chemical substances — Part 4: Analysis of lead and lead compounds by X-ray fluorescence spectrometry (XRF)*

ISO 22863-5:2021, *Fireworks — Test methods for determination of specific chemical substances — Part 5: Analysis of lead and lead compounds by inductively coupled plasma spectrometry (ICP)*

ISO 22863-8:2021, *Fireworks — Test methods for determination of specific chemical substances — Part 8: Arsenic content by hydride generation atomic fluorescence spectrometry*

ISO 22863-9:2021, *Fireworks — Test methods for determination of specific chemical substances — Part 9: Mercury content by hydride generation atomic fluorescence spectrometry*

EN 10025-2:2019, *Hot rolled products of structural steels - Part 2: Technical delivery conditions for non-alloy structural steels*

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EN 13763-1:2025, *Explosives for civil uses - Detonators and detonating cord relays - Part 1: Requirements*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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>

3.1**acceptance quality limit**

quality level that is the worst tolerable process average when a continuing series of lots is submitted for acceptance sampling

[SOURCE: ISO 2859-1:2026, definition 3.1.26]

3.2**critical non-conforming unit**

non-conforming unit with one or more critical non-conformities, with or without major or minor non-conformities

3.3**critical non-conformity**

non-conformity that judgement and experience indicate is likely to result in hazardous or unsafe conditions

Note 1 to entry: This type of non-conformity is referred to as a 'class A non-conformity' in ISO 2859-1:2026.

3.4**debris**

any part of the article which remains after the article has ceased to function

3.5**effect distance**

maximum distance of the effect in the direction of firing measured from the base of the article

Note 1 to entry: Materials such as confetti etc. are not considered as effect.

3.6**detonation**

reaction which propagates through an explosive at supersonic velocity in the reacting explosive

[SOURCE: EN 16265:2015, definition 3.2.15]

3.7**detonative explosive**

substance or mixture of substances which can undergo a fast internal decomposition reaction leading to a detonation in normal use

[SOURCE: EN 16265:2015, definition 3.2.16]

3.8**electric igniter**

article containing explosive substance(s) used to initiate combustion or deflagration which is actuated by electrical means (e.g. a fusehead)

Note 1 to entry: Such articles are often equipped with leading wires which supply the electric power to their sensitive element.

3.9**electrical ignition**

any method of generating heat/sparks by electrical means

3.10**explosion**

sudden release of energy accompanied by a report with or without a flash

3.11**friction head**

ignition head designed to be initiated by friction

3.12**functioning length**

distance over which the audible or visual effects of a line rocket are produced

3.13**fusehead**

component of an electric igniter consisting of a bridgewire coated in a pyrotechnic composition and protected by a layer of lacquer

3.14**hazardous debris**

any debris capable of causing personal injury including but not limited to, sharp fragments, heavy casing fragments and any burning and/or incandescent material

Note 1 to entry: Materials such as confetti etc. are not considered as hazardous debris.

3.15**initial fuse time**

burning time of the initial fuse

3.16**initial fuse**

component of an article which once ignited provides a delay to the start of the functioning of the article

3.17**lifting cup**

means of separating the lift charge at the base of an article from effects above it by means of a membrane often made of card/paper

3.18**major non-conforming unit**

non-conforming unit with one or more major non-conformities, with or without minor non-conformities, but with no critical non-conformities

prEN 16256:2026 (E)**3.19****major non-conformity**

non-conformity, other than a critical non-conformity, which is likely to result in failure, to reduce materially the usability of the article, or to increase the potential hazard

Note 1 to entry: This type of non-conformity is referred to as a 'class B non-conformity' in ISO 2859-1:2026.

3.20**minor non-conforming unit**

non-conforming unit with one or more minor non-conformities, but with no critical or major non-conformities

3.21**minor non-conformity**

non-conformity that is not likely to reduce materially the usability of the article

Note 1 to entry: This type of non-conformity is referred to as a 'class C non-conformity' in ISO 2859-1:2026.

3.22**net explosive content****NEC**

mass of pyrotechnic composition in the article, excluding the pyrotechnic composition in the initial fuse, transmitting fuses and friction or ignition heads

Note 1 to entry: Net equivalent quantity (NEQ), net explosive mass (NEM), or net explosive weight (NEW) are often used to convey the same meaning.

3.23**nitrocellulose cloth**

nitrated cellulose material with less than 12,6 % nitrogen content that has the appearance of a woven cloth and which burns rapidly when ignited

3.24**nitrocellulose cotton**

nitrated cellulose material with less than 12,6 % nitrogen content that has the appearance of the raw cotton as taken from around the cotton seed and which burns rapidly when ignited

3.25**nitrocellulose floss**

nitrated cellulose material with less than 12,6 % nitrogen content that has the appearance of chopped flock/felt, which burns rapidly when ignited

3.26**nitrocellulose string**

nitrated cellulose material with less than 12,6 % nitrogen content that has the appearance of string, which burns rapidly when ignited

3.27**nitrocellulose paper**

nitrated cellulose material with less than 12,6 % nitrogen content with the appearance of sheet paper, which burns rapidly when ignited

3.28**non-conforming unit**

article or a primary pack with one or more non-conformities

3.29**non-conformity**

non-fulfilment of a requirement

[SOURCE: ISO 9000:2015, definition 3.6.9]

3.30**preliminary effect**

visual effect which follows the initial fuse burning and precedes the first principal effect of an article

3.31**primary pack**

package of one or more articles of the same category and generic type, offered for retail sale as a single unit

3.32**principal effect**

any of the effects listed in Table 1 for the particular type of article

3.33**pyrotechnic composition**

substance or mixture of substances which is designed, on ignition or initiation, to produce an aural and/or visual effect and/or to evolve gas

3.34**pyrotechnic star**

unit consisting solely of consolidated pyrotechnic material

3.35**pyrotechnic unit**

discrete pyrotechnic construction that is assembled into or on an article and which, upon functioning, will react to produce a visual and/or aural effect

Note 1 to entry: The effect produced by a pyrotechnic unit is normally part of a combination of effects produced by the article.

3.36**radial effect distance**

maximum distance of the effect in any direction except in the direction of firing

Note 1 to entry: Materials such as confetti etc. are not considered as effect.

3.37**radial safety distance**

minimum distance from the article to persons or flammable materials in any direction except the firing direction, to reduce risk to as low as reasonably practicable

Note 1 to entry: There might be different safety distances for persons who are protected from the effects by protective equipment and those without protective equipment.

prEN 16256:2026 (E)**3.38****safety distance**

minimum distance of persons or flammable materials or obstructions from the article in the direction of the effect to reduce the risk to as low as reasonably practicable

Note 1 to entry: There might be different safety distances for persons who are protected from the effects by protective equipment and those without protective equipment.

3.39**selection pack**

package of articles of more than one type and/or more than one category, offered for retail sale as a single unit

Note 1 to entry: A selection pack may contain primary packs as well as individual articles.

3.40**transmitting fuse**

component of an article which is intended to transmit ignition from one part of an article to another, with or without a delay

3.41**effect dimensions**

dimensions of the visual effect in space length, width and height

Note 1 to entry: Dimensional effects do not apply to smoke, confetti and streamers.

3.42**effect charge**

pyrotechnic composition, other than propellant charge or bursting charge, which upon functioning will react to produce a visual and/or aural effect

3.43**bursting charge**

pyrotechnic composition which is intended to burst open the article case, in order to expel one or more pyrotechnic units, which can also transmit ignition

3.44**propellant charge**

pyrotechnic composition which will burn to evolve gas which, in turn, is intended to propel the pyrotechnic article as a whole or to expel one or more pyrotechnic units without bursting the pyrotechnic article case(s), and which can also transmit ignition

3.45**type test**

test performed on a sample of products, representative of the production envisaged, in order to demonstrate their compliance with the essential safety requirements of Annex I and the relevant provisions of Directive 2013/29/EU

Note 1 to entry: The successful submission to type tests leads to the attribution of an EU-type examination certificate.

3.46

batch test

test performed on one or more sample(s) of products taken at random from a production batch to check compliance with a given specification

Note 1 to entry: Batch testing needs all products in the production batch to comply with the characteristics the standard requires to ensure homogeneity of the whole batch. It aims at proving all products which are placed on the market are in conformity with the type which is described in the EU-type examination certificate and have been successfully submitted to type tests determined by the standard.

4 Generic types

Table 1 lists generic types of theatrical pyrotechnic articles and describes their principal effects.

Table 1 — Description and primary effects of generic types

Generic type	Description	Principal effect/comments
Airburst	An article containing pyrotechnic composition(s) which is suspended in the air and functions to produce a visual and/or aural effect.	Production of visual and/or aural effects.
Bengal flame	A pyrotechnic composition or an article containing pyrotechnic composition(s) which produces a (coloured) light or flame where the effect is not instantaneous.	Production of coloured flame (and smoke).
Bengal flare	An article containing consolidated pyrotechnic composition(s) which produces a (coloured) light or flame where the effect is not instantaneous.	Production of coloured flame (and smoke).
Bengal stick	A stick partially coated with slow-burning pyrotechnic composition(s), designed to be held in the hand.	Emission of a bright light for a stated duration.
Binary mixture	Separate non-pyrotechnic composition(s) which form a pyrotechnic composition, when combined.	Various effects including but not limited to report, coloured flashes of light, fire, smoke, sparks.
Carretilla	An article containing pressed or consolidated pyrotechnic composition(s) producing light and sparks in a directed manner, and which can culminate in the production of a report, manufactured with an integral fitting designed to be mounted on a rod.	Produces light, sparks and, if any, a report.
Combination	An assembly including several elements, either containing the same type or several types, each corresponding to one of the types of pyrotechnic articles listed in this table, with one or multiple points of ignition and in which the initial fuse transmits fire from one element to the next to fire the articles sequentially or in some other pattern, and where not all the elements of the combination are type approved.	As per individual elements.