

This document is a preview generated by EVS

Pürotehnilised tooted. Laval ja teatris kasutatakavad pürotehnika. Osa 3: Ehitus- ja toimivusnõuded

Pyrotechnic articles - Theatrical pyrotechnic articles - Part 3: Requirements for construction and performance

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 16256-3:2012 sisaldab Euroopa standardi EN 16256-3:2012 ingliskeelset teksti.	This Estonian standard EVS-EN 16256-3:2012 consists of the English text of the European standard EN 16256-3:2012.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kätesaadavaks 19.12.2012.	Date of Availability of the European standard is 19.12.2012.
Standard on kätesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 71.100.30

Standardite reproduutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Aru 10, 10317 Tallinn, Eesti; www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:
Aru 10, 10317 Tallinn, Estonia; www.evs.ee; phone 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

EN 16256-3

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2012

ICS 71.100.30

English Version

Pyrotechnic articles - Theatrical pyrotechnic articles - Part 3: Requirements for construction and performance

Articles pyrotechniques - Articles pyrotechniques destinés
au théâtre - Partie 3: Exigences de construction et de
performances

Pyrotechnische Gegenstände - Pyrotechnische
Gegenstände für Bühne und Theater - Teil 3:
Anforderungen an die Konstruktion und Funktion

This European Standard was approved by CEN on 3 November 2012.

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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	Page
Foreword	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Construction	5
4.1 General requirements (type test and batch test)	5
4.2 Permitted elements for combinations T1 indoor use (type test)	6
4.3 Length of uncoated end of Bengal sticks (type test and batch test)	6
4.4 Materials not permitted for T1 Maroons (type test and batch test)	7
5 Pyrotechnic composition (type test)	7
6 Means of ignition (type test and batch test)	10
6.1 General requirements	10
6.2 Initial fuses and electric igniters	10
6.3 Friction heads	10
6.4 Permitted means of ignition for theatrical pyrotechnic articles T1	10
7 Performance	12
7.1 Properties to be checked before functioning tests	12
7.1.1 Loose pyrotechnic composition after mechanical conditioning (type test)	12
7.1.2 Integrity (type test and batch test)	12
7.2 Properties to be checked during functioning tests (type test and batch test)	12
7.2.1 Principal effects	12
7.2.2 Functioning	12
7.2.3 Stability during functioning	12
7.2.4 Effect dimensions	13
7.2.5 Sound pressure level	14
7.2.6 Explosions and other failures	14
7.2.7 Burning or incandescent matter	14
7.2.8 Extinguishing of flames	14
7.2.9 Projected debris	15
7.2.10 Burning rate of pyrotechnic composition	15
7.3 Integrity to be checked after functioning tests (type test and batch test)	15
7.4 Minimum safety distances for theatrical pyrotechnic articles T1 (type test)	15
8 Primary pack or selection pack (type test and batch test)	16
9 Type testing	16
9.1 General	16
9.2 Number of items to be tested	17
9.3 Additional requirements for primary packs	17
9.3.1 Thermal and mechanical conditioning	17
9.3.2 Labelling	17
9.4 Test report	17
10 Batch testing	18
10.1 General	18
10.2 Sampling plans	18
10.3 Unit of product	18
10.4 Nonconformities	19
10.5 Test report	20
10.6 Acceptance or rejection of a batch	21

10.6.1 Nonconforming units	21
10.6.2 Critical nonconforming units	21
10.6.3 Major nonconforming units	21
10.6.4 Minor nonconforming units.....	21
10.6.5 Theatrical pyrotechnic articles supplied in primary packs or selection packs	21
Annex A (informative) Overview of essential safety requirements and corresponding clauses of all parts of this European Standard.....	22
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2007/23/EC on the placing on the market of pyrotechnic articles	23
Bibliography.....	25

Foreword

This document (EN 16256-3:2012) 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 2013, and conflicting national standards shall be withdrawn at the latest by June 2013.

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 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.

This European Standard is one of the series of standards as listed below:

- EN 16256-1, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 1: Terminology*
- EN 16256-2, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 2: Categories of theatrical pyrotechnic articles*
- EN 16256-3, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 3: Requirements for construction and performance*
- EN 16256-4, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 4: Minimum labelling requirements and instructions for use*
- EN 16256-5, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 5: Test methods*

CEN/TC 212 has also developed European Standards for:

- Pyrotechnic articles — Fireworks Categories 1, 2 and 3
- Pyrotechnic articles — Fireworks, Category 4
- Pyrotechnic articles — Pyrotechnic articles for vehicles
- Pyrotechnic articles — Other pyrotechnic articles

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, 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.

1 Scope

This European Standard specifies requirements for the construction, performance and primary packaging of theatrical pyrotechnical articles of the generic types defined in EN 16256-1:2012, Clause 3.

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

This European Standard does not apply for articles containing military explosives or commercial blasting agents except for black powder or flash composition.

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

- arsenic or arsenic compounds;
- polychlorobenzenes;
- lead or lead compounds;
- mercury compounds;
- white phosphorus;
- picrates or picric acid.

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 16256-1:2012, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 1: Terminology*

EN 16256-4:2012, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 4: Minimum labelling requirements and instructions for use*

EN 16256-5:2012, *Pyrotechnic articles — Theatrical pyrotechnic articles — Part 5: Test methods*

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

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 16256-1:2012 apply.

4 Construction

4.1 General requirements (type test and batch test)

When tested in accordance with EN 16256-5:2012, 6.2.2, the article dimensions shall be in accordance with the manufacturers declaration.