MAURITIAN STANDARD

MS EN 15947-4:2010

First edition
2014-05-03

Pyrotechnic articles – Fireworks, Categories 1, 2 and 3

Part 4: Test methods

ICS 71.100.30

Mauritius Standards Bureau
Moka

This national standard is the identical implementation of EN 15947-4:2010 and is adopted with the permission of CEN, Avenue Marnix 17, B-1000 Brussels, Belgium.

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National foreword

This Mauritian Standard is identical with the European Standard **EN 15947-4:2010,** *Pyrotechnic articles – Fireworks, Categories 1, 2 and 3 - Part 4: Test methods*. It was adopted by the Mauritius Standards Bureau on the recommendation of the **Chemicals Standards Committee** and approval of the **Standards Council** on 26 March 2014. It was notified in the Government Gazette on **3 May 2014***.

This standard together with MS EN 15947-3:2010 and MS EN 15947-5:2010 supersede MS 132-2:2004 (BS 7114-2:1988), MS 132-3:2004 (BS 7114-3:1988), MS EN 14035-38:2006, MS EN 14035-29:2004, MS EN 14035-6:2004, MS EN 14035-19:2003, MS EN 14035-25:2005, MS EN 14035-28:2004, MS EN 14035-22:2004, MS EN 14035-5:2006, MS EN 14035-7:2004, MS EN 14035-15:2003, MS EN 14035-27:2003, MS EN 14035-24:2004, MS EN 14035-35:2004, MS EN 14035-36:2004, MS EN 14035-23:2003 and MS EN 14035-34:2003.

For the purposes of this standard the following change should be made:

- the word 'European Standard' should be read as 'Mauritian Standard'.

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EUROPEAN STANDARD

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English Version

Pyrotechnic articles - Fireworks, Categories 1, 2 and 3 - Part 4: Test methods

Articles pyrotechniques - Artifices de divertissement, Catégories 1, 2 et 3 - Partie 4: Méthodes d'essai

Pyrotechnische Gegenstände - Feuerwerkskörper, Kategorien 1, 2 und 3 - Teil 4: Prüfverfahren

This European Standard was approved by CEN on 21 August 2010.

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 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 Management Centre has the same status as the official versions.

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

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Contents

Page

Foreword

This document (EN 15947-4:2010) 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 March 2011, and conflicting national standards shall be withdrawn at the latest by March 2011.

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 14035-9:2004, EN 14035-20:2005, EN 14035-6:2004, EN 14035-7:2004, EN 14035-31:2005, EN 14035-3:2004, EN 14035-34:2003, EN 14035-5:2006, EN 14035-15:2003, EN 14035-22:2004, EN 14035-4:2003, EN 14035-23:2003, EN 14035-33:2005, EN 14035-29:2004, EN 14035-36:2004, EN 14035-8:2004, EN 14035-19:2003, EN 14035-13:2004, EN 14035-12:2003, EN 14035-17:2004, EN 14035-35:2004, EN 14035-10:2004, EN 14035-18:2004, EN 14035-38:2006, EN 14035-24:2004, EN 14035-21:2005, EN 14035-25:2005, EN 14035-28:2004, EN 14035-27:2003.

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 15947-1, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 1: Terminology*

— EN 15947-2, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 2: Categories and types of firework*

— EN 15947-3, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 3: Minimum labelling requirements*

— EN 15947-4, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 4: Test methods*

— EN 15947-5, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 5: Requirements for construction and performance*

CEN/TC 212 is currently also developing European Standards for:

— Pyrotechnic articles — Fireworks Category 4;

— Pyrotechnic articles — Theatrical pyrotechnic articles;

— Pyrotechnic articles — Pyrotechnic articles for vehicles;

— Pyrotechnic articles — Other pyrotechnic articles.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This European Standard specifies test methods. It is applicable to fireworks in categories 1, 2 and 3 according to EN 15947-2:2010.

2 Normative references

The following referenced documents are indispensable for the application 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 15947-1:2010, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 1: Terminology*

EN 15947-3:2010, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 3: Minimum labelling requirements*

EN 15947-5, *Pyrotechnic articles — Fireworks, Categories 1, 2 and 3 — Part 5: Requirements for construction and performance*

EN 61672-1:2003, *Electroacoustics — Sound level meters — Part 1: Specifications (IEC 61672-1:2002)*

EN ISO 845, *Cellular plastics and rubbers — Determination of apparent density (ISO 845:2006)*

EN ISO 868, *Plastics and ebonite — Determination of indentation hardness by means of a durometer (Shore hardness) (ISO 868:2003)*

EN ISO 2439, *Flexible cellular polymeric materials — Determination of hardness (indentation technique) (ISO 2439:2008)*

ISO 3599, *Vernier callipers reading to 0,1 and 0,05 mm*

ISO 6344-3, *Coated abrasives — Grain size analysis — Part 3: Determination of grain size distribution of microgrits P240 to P2500*

ISO 21948, *Coated abrasives — Plain sheets*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 15947-1:2010 apply.

4 Test environment

4.1 General

The test area shall be a clean, flat, horizontal, non-flammable and sound reflecting surface (for example concrete). The test sample shall be placed in accordance with the instructions on the label in the centre of the test area.

4.2 Indoor

The test area shall be indoors.

The test area shall be inside a fume cupboard, or similar enclosed space, which is capable of preventing movement of air.