

This is a preview of "ISO 25947-4:2017". [Click here to purchase the full version from the ANSI store.](#)

First edition
2017-04

Fireworks — Categories 1, 2 and 3 — Part 4: Test methods

*Artifices de divertissement — Catégories 1, 2 et 3 —
Partie 4: Méthodes d'essai*



Reference number
ISO 25947-4:2017(E)

© ISO 2017

This is a preview of "ISO 25947-4:2017". Click [here](#) to purchase the full version from the ANSI store.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

This is a preview of "ISO 25947-4:2017". Click here to purchase the full version from the ANSI store.

Contents

	Page
Foreword	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Test environment	1
4.1 General.....	1
4.2 Indoor.....	1
4.3 Outdoor.....	2
4.3.1 General.....	2
4.3.2 Category 1.....	2
4.3.3 Category 2.....	2
4.3.4 Category 3.....	2
4.4 Monitoring height.....	2
5 Apparatus	2
6 Test methods	7
6.1 General.....	7
6.2 Construction and stability.....	8
6.2.1 Length of handle.....	8
6.2.2 Attachment of separate handle.....	8
6.2.3 Length of item.....	8
6.2.4 Length of pull-string or pull-strip.....	9
6.2.5 Determination of diameter.....	9
6.2.6 Attachment of initial fuse.....	9
6.2.7 Attachment of sealing paper, ignition head or friction head.....	9
6.2.8 Resistance to ignition by an abrasive surface.....	10
6.2.9 Height of initial fuse for mounted wheels in category 3.....	10
6.3 Design — Verification.....	10
6.3.1 General.....	10
6.3.2 Conformity to drawings and part lists.....	10
6.3.3 Pyrotechnic composition — Determination of net explosive content or total NEC.....	10
6.4 Paper tests.....	11
6.4.1 Test for burning or incandescent matter.....	11
6.4.2 Test for horizontal projected debris.....	12
6.4.3 Test for vertical projected debris.....	14
6.5 Angle of ascent and height of effects.....	17
6.5.1 Apparatus.....	17
6.5.2 Procedure for double bangers and double flash bangers.....	17
6.5.3 Procedure for items other than double bangers and double flash bangers.....	17
6.6 Measurement of sound pressure level.....	17
6.6.1 General measurement for outdoors.....	17
6.6.2 Party poppers for indoors.....	18
6.6.3 Christmas crackers and snaps for indoors.....	19
6.7 Timing measurement.....	20
6.7.1 Apparatus.....	20
6.7.2 Procedure.....	21
6.8 Measuring of labelling.....	21
6.8.1 Apparatus.....	21
6.8.2 Procedure.....	21
6.9 Extinguishing of flames.....	21
6.9.1 Apparatus.....	21
6.9.2 Procedure.....	21

This is a preview of "ISO 25947-4:2017". Click here to purchase the full version from the ANSI store.

6.10	Burning rate of composition	22
	6.10.1 Apparatus.....	22
6.11	Droop test.....	22
	6.11.1 Apparatus.....	22
	6.11.2 Procedure.....	22
6.12	Projected debris (outdoor).....	22
	6.12.1 Apparatus.....	22
	6.12.2 Procedure.....	22
6.13	Incandescent matter	22
6.14	Visual and audible examinations.....	22
6.15	Mechanical conditioning	23
	6.15.1 Apparatus.....	23
	6.15.2 Procedure.....	23
6.16	Thermal conditioning.....	23
	6.16.1 Apparatus.....	23
	6.16.2 Procedure (option 1).....	23
	6.16.3 Procedure (option 2).....	24
6.17	Striking surface test.....	24
	6.17.1 Apparatus.....	24
	6.17.2 Procedure.....	24
6.18	Function test	24
	6.18.1 Apparatus.....	24
	6.18.2 Procedure.....	24
6.19	Determination of tube angle	25
	6.19.1 Apparatus.....	25
	6.19.2 Procedure.....	25
Annex A (informative) Mechanical conditioning (shock apparatus)		26
Annex B (informative) Determination of silver fulminate		30
Bibliography		32

This is a preview of "ISO 25947-4:2017". [Click here to purchase the full version from the ANSI store.](#)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 264, *Fireworks*.

A list of all the parts in the ISO 25947 series can be found on the ISO website.

This is a preview of "ISO 25947-4:2017". [Click here to purchase the full version from the ANSI store.](#)