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Fireworks — Category 4 —

Part 4: Minimum labelling requirements and instructions for use

Artifices de divertissement — Catégorie 4 —

Partie 4: Exigences minimales d'étiquetage et documentation utilisateur

Reference number
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Contents

Page

Foreword

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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).

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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 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 26261 series can be found on the ISO website.

Fireworks — Category 4 —

Part 4:
Minimum labelling requirements and instructions for use

1 Scope

This document specifies the minimum labelling requirements and the mandatory instructions for use for Category 4 fireworks. This document does not apply for theatrical pyrotechnic articles which are designed for indoor or outdoor stage use, including film and television productions or similar use.

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.

ISO 26261-1, *Fireworks — Category 4 — Part 1: Terminology*

ISO 26261-2:2017, *Fireworks — Category 4 — Part 2: Requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 26261-1 apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Minimum labelling requirements

4.1 General

Fireworks shall be marked with the minimum information specified in 4.2 to 4.12.

Conformity to the requirements specified in 4.1 to 4.11 shall be verified by visual examination.

The specified information shall be given in the official language(s) of the member state in which the firework is placed on the market.

For each language, the minimum specified information shall be presented as a whole and shall not be interrupted by other text. Additional text given in any language shall not conflict with the above specified information.

4.2 Name and type of firework

Labels to be provided directly on the article (or on the smallest piece of packaging if the article does not provide sufficient space for the labelling requirements) shall include the subtype (or generic type if

the article does not belong to a subtype) (see ISO 26261-1), plus a concise designation of the field of use whenever it is necessary to assure a safe and correct use of the article.

EXAMPLE "Shell" or "Bengal flame" or "Shell in mortar".

If a trade name is used in addition to the type name, it shall not conflict with the principal effects of the relevant type of firework or with the name of another generic or subtype of firework.

4.3 Category and registration number

The category shall be given on the label.

Additional traceability information regarding the performed batch testing, e.g. lot number, may be displayed on the label of the article or the smallest piece of packaging.

The registration number, if any, shall be marked on the label. Examples for registration numbers are given below.

EXAMPLE 1 A registration number used in Japan is given as example below:

V – 00 – xxxx

where V refers to the serial number, 00 refers to the number linked to the country of the manufacturer or importer (e.g. 00 for Japan) and xxxx refers to the type of fireworks.

EXAMPLE 2 A registration number used in the European Union is given as example below:

XXXX – F4 – ZZZZ…

where XXXX refers to the identification number of the notified body issuing the certificate, F4 refers to the category of firework in abbreviated format, and where ZZZZ is a processing number used by the notified body.

4.4 Explosive content

The labelling shall include the net explosive content or the total NEC of the firework.

The abbreviation for the net explosive content (NEC) may be used for the labelling.

4.5 Safety and disposal information

The safety and disposal information provided in the instructions for use shall be readily available.

"*For use only by persons with specialist knowledge*" shall be printed on the label and emphasized by use of a heading, or bold type, or similar.

4.6 Year of production

The year of production shall be printed on the label, either by 4 or 2 digits, e.g. "2013" or "13".

4.7 Details on manufacturer or importer

Labelling shall include the name and address of the manufacturer and importer, if applicable.

The address shall comprise at least the town and the country.

4.8 Printing

Labelling shall be clearly visible, easily legible, indelible and on a contrasting background colour.

4.9 Marking of very small items

If the firework does not provide enough space to carry all the specified information, at least the manufacturer's details or the importer's details shall be given on the firework, if at all possible.

In this case, other information will be given on a protective pack label and the firework shall be supplied only in this protective pack. Where the information printed on the protective pack might be affected by the opening of the pack, the manufacturer will ensure that the pack design prevents loss of information when the label is broken. The protective pack shall be marked with the statement: "*Must be supplied as packaged*". This statement shall appear adjacent to the type name or category.

4.10 Minimum safety information

4.10.1 General

The following information shall be printed on the label: "*Minimum safety distance to be determined by user according to the supplied product data*" and "*Article to be used in accordance with written instructions and national regulations*".

4.10.2 Mandatory parameters

For each generic type, the following parameter shall be printed, if applicable (see Annex A).

— A: Effect height or burst height according to the generic type.

— B: Maximum A-weighted impulse sound pressure level [in dB (AI) max at *x* m, where x is the distance at which the sound level was measured], according to ISO 26261-2:2017, 7.2.5.

— C: Debris (distance to which dangerous debris can be projected).

— D: Information on incandescent and/or burning matter. If incandescent and/or burning matter returns to the level from which the device was fired, the D box shall be appropriately marked with a "✓".

— E: Range (distance between the firing point and the point of explosion onto the water for aquatic fireworks).

— R: Overall duration for aerial wheels.

— W: Maximum firing angle if the angles of the tubes are not visible.

The above mentioned parameters are necessary for calculating the safety distances and shall be given in one textbox on the label.

Every value shall be displayed in SI units (International System of Units).

4.10.3 Format

The effect parameters as stated above shall be placed in the order of appearance above, according to the following format:

X: Y

where

X is the parameter A, B, C, D, E, R or W;

Y is the numerical value of the parameter with its unit or an appropriate mark (for example, ✓ or –).

Additional optional parameters as defined in Annex A may be printed on the label, as long as they are kept separate from the mandatory parameters and the coding, if used, is compliant with Annex A.

4.11 Specific labelling for individual items

4.11.1 Specific labelling requirement for combinations

For combinations equipped with multiple initial fuses, each fuse shall be clearly identified.

If the firing orientation is not apparent from the design of the exterior of the article, then sufficient information about it shall be provided on the label.

For combinations with angled components, the maximum angle of firing shall be displayed on the label.

4.11.2 Specific labelling requirement for shells

In cases where a specific mortar is required by the manufacturer, the following sentence shall be displayed on the label: "*Use specific mortar (see instructions).*" Information on the specific mortar shall be included in the instructions for use.

4.12 Additional information

Additional information may be displayed on the labelling or on the instructions for use, provided that this does not conflict with the mandatory information.

5 Operating instructions

Instructions for safe handling, storage, use and disposal shall be supplied by the manufacturer/importer, including information regarding special equipment for use, if necessary.

The information as required by 4.11.1 shall be included in the instructions for use.

Annex A
(normative)

List of mandatory and optional parameters and corresponding codes

Table A.1 applies for the coding of mandatory and optional parameters.

Table A.1 — List of mandatory and optional parameters and corresponding codes

Code	Status	Description	Examples/Comments
A	M	Burst height/effect height (whichever is applicable)	(Effect distance for theatrical articles)
B	M/O	Sound pressure level including the measuring distance	Value at a distance
C	M	Projected debris distance	
D	M	If incandescent and/or burning matter reaches ground	"✓" if incandescent and/or burning matter reaches ground
E	M/O	Effect range	This parameter is mandatory for aquatic fireworks
F	O	Effect broadness	
G	O	Calibre	If not required in description
H	O	Initial fuse time	Not relevant for electrically ignited items
I	NOT USED to avoid ambiguity with number "1"		
J	O	Flight time	e.g. time to burst for shells
K	O	Effect time	e.g. duration of stars or effects
L	O	Flash powder content	e.g. for compliance with UN default classification (in weight or in %)
M	O	Gross mass	e.g. for calculating storage limits
N	O	Effect	If not explicit in description or name
O	NOT USED to avoid ambiguity with number "0"		
P	O	Classification reference	e.g. CAD reference
Q	O	Drift	e.g. for aerial wheels
R	M/O	Overall duration	M for aerial wheels
S	O	If multiple effects	"✓" in case of multiple explosion, followed by the number of explosions
T	O	Radial effect distance	
U	NOT USED to avoid ambiguity with letter "V"		
V	O	Burning rate	
W	M/O	Maximum firing angle	See ISO 26261-2:2017, Clause 5
M = This information is mandatory. O = This information is optional (depending on type or at discretion of manufacturer).			

Bibliography

[1] ISO 26261-3, *Fireworks — Category 4 — Part 3: Test methods*

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