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Symboles graphiques - Couleurs de sécurité et signaux de sécurité - Partie 2: Principes de conception pour l'étiquetage de sécurité des produits

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Graphical symbols — Safety colours and safety signs —

Part 2: Design principles for product safety labels

Symboles graphiques — Couleurs de sécurité et signaux de sécurité — Partie 2: Principes de conception pour l'étiquetage de sécurité des produits

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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 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.

The committee responsible for this document is ISO/TC 145, *Graphical symbols*, Subcommittee SC 2, *Safety identification, signs, shapes, symbols and colours*.

This second edition cancels and replaces the first edition (ISO 3864-2:2004), which has been technically revised.

It also incorporates the Amendment ISO 3864-2:2004/Amd 1:2011.

A list of all the parts in the ISO 3864 series can be found on the ISO website.

Introduction

There is a need to standardize a system of communicating safety information on products. This document provides layouts for product safety labels that can be used to convey safety information related to the installation, operation, use, maintenance and/or disposal of a product. Product safety labels are not to be used as safety signs on walls in workplaces and public buildings.

This document builds on the system of hazard communication set forth in ISO 3864-1. This document sets forth additional layouts for product safety labels that assist in communicating

a) the severity level of the hazard, and

b) supplementary safety information in word or symbolic form.

To assist in the communication of safety information across language barriers, all of the product safety label layouts shown in this document incorporate safety signs. This document includes product safety label layouts that use only safety signs as well as layouts that use additional graphical symbols and text. Product safety labels that include text can be used when some of the necessary safety information cannot be communicated in symbolic form, when the combination of safety sign with text is judged to be more effective or when legal requirements in countries mandate the use of text to communicate safety information. Education is an essential part of any system that provides safety information. Because the amount of safety information necessary to operate or service a product safely may be more than can be conveyed in a product safety label, a product's accompanying documentation (e.g. product literature, installation manual, operation manual, service manual) may supplement the product's safety labels to provide the user with the additional information necessary for safety. A product's user documentation also offers a place to educate users on the meaning of the safety signs and supplementary safety information symbols shown on the product's safety labels (see Annex A).

When a product safety label is to be developed, the hazards associated with the product and their corresponding risks should be evaluated. Many factors are considered when deciding whether or not to warn, whether to warn on the product in the form of a product safety label and/or to warn in user documentation. Such factors include the severity of the risk, the probability of engaging the hazard, the degree to which the risk is obvious and the type of person likely to possibly engage the hazard.

Statutory or regulatory requirements in some countries may differ from some requirements given in this document. To facilitate international standardization of product safety labels, this document should be considered when revising regulations.

Graphical symbols — Safety colours and safety signs —

Part 2: Design principles for product safety labels

IMPORTANT — The colours represented in the electronic file of this document can be neither viewed on screen nor printed as true representations. Although the copies of this document printed by ISO have been produced to correspond (with an acceptable tolerance as judged by the naked eye) to the colour requirements, it is not intended that these printed copies be used for colour matching. Instead, consult ISO 3864-4, which provides colorimetric and photometric properties together with, as a guideline, references from colour order systems. For the colour orange, see Annex E.

1 Scope

This document establishes additional principles to ISO 3864-1 for the design of safety labels for products, i.e. any items manufactured and offered for sale in the normal course of commerce, including but not limited to consumer products and industrial equipment. The purpose of a product safety label is to alert persons to a specific hazard and to identify how the hazard can be avoided.

This document is applicable to all products in all industries where safety-related questions can be posed. However, it is not applicable to safety labels used

— for chemicals,

— for the transport of dangerous substances and preparations and

— in those sectors subject to legal regulations which differ from certain provisions of this document.

The design principles incorporated in this document are intended to be used by all ISO Technical Committees and anyone designing product safety labels in the development of product safety label standards for their industries or services.

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 3864-1, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 3864-4, *Graphical symbols — Safety colours and safety signs — Part 4: Colorimetric and photometric properties of safety sign materials*

3 Terms and definitions

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

3.1
CAUTION
signal word used to indicate a potentially hazardous situation which, if not avoided, could result in minor or moderate injury

3.2
combination product safety label
combination of product safety sign and/or supplementary safety information and/or hazard severity panel on one rectangular label

Note 1 to entry: A combination product safety label conveys one safety message.

3.3
DANGER
signal word used to indicate an imminently hazardous situation which, if not avoided, will result in death or serious injury

3.4
general warning sign
safety sign used to signify a general hazard

Note 1 to entry: The general warning sign is standardized/registered as ISO 7010-W001.

Note 2 to entry: This safety sign can be used to draw attention to a product safety label (see Figure A.5).

3.5
harm
physical injury and/or damage to health or property

[SOURCE: ISO/IEC Guide 51:2014, 3.1, modified]

3.6
hazard
source of potential harm

[SOURCE: ISO/IEC Guide 51:2014, 3.2, modified]

Note 1 to entry: The term hazard is generally qualified in order to define its origin or the nature of the expected harm (e.g. electric shock hazard, crushing hazard, cutting hazard, toxic hazard, fire hazard, drowning hazard).

3.7
hazard severity panel
area of a combination or multiple product safety label that communicates the category of risk associated with a hazard

Note 1 to entry: This panel contains the general warning sign, the corresponding colour and an optional signal word (see Table 2).

3.8
multiple product safety label
product safety label that contains two or more safety signs on the same rectangular label and, if used, the supplementary safety information and/or the hazard severity panel

3.9
product safety label
label on a product that informs the observer of one or more potential hazards and describes the safety precautions and/or actions required to avoid the hazard(s)

Note 1 to entry: It communicates a hazard, a hazardous situation, a precaution to avoid a hazard and/or a result of not avoiding a hazard.

3.10
residual risk
risk remaining after risk reduction measures have been implemented

[SOURCE: ISO/IEC Guide 51:2014, 3.8]

3.11
risk
combination of the probability of occurrence of harm and the severity of that harm

[SOURCE: ISO/IEC Guide 51:2014, 3.9, modified]

3.12
safety colour
colour with special properties to which a safety meaning is attributed

3.13
safe viewing distance
distance a person can be from the product safety label while still able to read the label accurately and have the opportunity to follow the product safety label's message

3.14
signal word
word that calls attention to a product safety label and designates a category of risk

3.15
supplementary safety information panel
safety information symbol or safety information text whose main purpose is to provide additional clarification

Note 1 to entry: A supplementary safety information panel typically communicates hazard consequence or hazard avoidance information.

3.16
target audience
person(s) to whom the product safety label is intended to convey its safety information

3.17
tolerable risk
level of risk that is accepted in a given context based on the current values of society

[SOURCE: ISO/IEC Guide 51:2014, 3.15, modified — Note 1 to entry deleted.]

3.18
WARNING
signal word used to indicate a potentially hazardous situation which, if not avoided, could result in death or serious injury

4 Purpose of safety colours

4.1 General

There are two basic purposes for using a specific safety colour on a product safety label:

a) the use of colour rapidly draws attention to the product safety label so that it is easily noticed;

b) the safety colour coding serves to identify and give meaning (through training and/or repeated exposure) to the product safety label as a whole and to its component parts.

Only safety colours in accordance with ISO 3864-4 colorimetric and photometric specifications shall be used, in addition to the colour orange which shall only be used on a WARNING hazard severity panel.