

**SINGAPORE STANDARD**

# **Graphical symbols – Safety colours and safety signs**

**– Part 3 : Design principles for graphical symbols for use in safety signs**

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– Part 3 : Design principles for graphical symbols for use in safety signs

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## SS 508:Part 3:2013+A1:2016

This Singapore Standard was approved by the General Engineering and Safety Standards Committee on behalf of the Singapore Standards Council on 15 March 2013.

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The General Engineering and Safety Standards Committee appointed by the Standards Council consists of the following members:

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*Ministry of Manpower*  
*National University of Singapore*  
*Pratt & Whitney Services Pte Ltd*  
*Society of Loss Prevention in the Process Industries*

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## **National Foreword**

This Singapore Standard was prepared by the Technical Committee on Workplace Safety and Health under the direction of the General Engineering and Safety Standards Committee.

The review of the SS 508 series of standards (Parts 1 to 4) resulted in the following:

- Confirmation with amendments of Part 2.
- Revision of Parts 1, 3 and 4: these parts have been renumbered, rearranged and retitled to be aligned with the ISO 3864 Parts 1, 3 and 4 as well as ISO 7010. The part on 'Safety signs used in workplaces and public areas' has been retitled to 'Registered safety signs'. A new part on colorimetric and photometric properties of safety sign materials was also added to the series.

The revised SS 508 now consists of the following five parts, under the general title 'Graphical symbols — Safety colours and safety signs':

- Part 1: Design principles for safety signs and safety markings (Identical adoption of ISO 3864-1:2011)
- Part 2: Design principles for product safety labels (Identical adoption of ISO 3864-2:2004 and ISO 3864-2:2004/Amd 1:2011)
- Part 3: Design principles for graphical symbols for use in safety signs (Identical adoption of ISO 3864-3:2012)
- Part 4: Colorimetric and photometric properties of safety sign materials (Identical adoption of ISO 3864-4:2011)
- Part 5: Registered safety signs (Identical adoption of ISO 7010:2011, ISO 7010:2011/Amd 1:2012, ISO 7010:2011/Amd 2:2012 and ISO 7010:2011/Amd 3:2012)

With this standard, there is harmonisation of all safety signs used in workplaces and public areas which will result in better understanding and communication of safety information.

This part of SS 508 is identical with ISO 3864-3 : 2011 – 'Graphical symbols – Safety colours and safety signs – Part 3: Design principles for graphical symbols for use in safety signs', published by the International Organization for Standardization. It is applicable to all locations where safety issues related to people need to be addressed. However, it is not applicable to the signalling used for guiding rail, road, river, maritime and air traffic and, generally speaking, to those sectors subject to a regulation which may differ. Symbols, labels and safety signs for chemicals and dangerous goods can be found in the following documents:

- a) SS 586 Specification for hazard communication for hazardous chemicals and dangerous goods

Part 1: Transport and storage of dangerous goods

Part 2: Globally harmonized system of classification and labelling of chemicals – Singapore's adaptations

Part 3: Preparation of safety data sheets (SDS)

- b) The Globally Harmonised System of Classification and Labelling of Chemicals ([http://www.unece.org/trans/danger/publi/ghs/ghs\\_pubdet.html](http://www.unece.org/trans/danger/publi/ghs/ghs_pubdet.html))

- c) The UN Recommendations on the Transport Of Dangerous Goods Model Regulations ([http://www.unece.org/trans/danger/publi/unrec/rev19/19files\\_e.html](http://www.unece.org/trans/danger/publi/unrec/rev19/19files_e.html))

Attention is drawn to the following:

1. Where the words 'this part of ISO 3864' appear, they should be interpreted as 'this part of SS 508'.
2. The comma has been used throughout as a decimal marker in ISO 3864-3, whereas in Singapore Standards it is a practice to use a full-point on the baseline as the decimal marker.
3. The reference to International Standards shall be replaced by the following Singapore Standards:

International Standard	Corresponding Singapore Standard
ISO 3864-1	SS 508 : Part 1 : 2013
ISO 3864-2	SS 508 : Part 2 : 2008 (2013)
ISO 3864-4	SS 508 : Part 4 : 2013
ISO 7010	SS 508 : Part 5 : 2013

Attention is drawn to the possibility that some of the elements of this Singapore Standard may be the subject of patent rights. Enterprise Singapore shall not be held responsible for identifying any or all of such patent rights.

**NOTE**

1. *Singapore Standards (SSs) and Technical References (TRs) are reviewed periodically to keep abreast of technical changes, technological developments and industry practices. The changes are documented through the issue of either amendments or revisions.*
2. *An SS or TR is voluntary in nature except when it is made mandatory by a regulatory authority. It can also be cited in contracts making its application a business necessity. Users are advised to assess and determine whether the SS or TR is suitable for their intended use or purpose. If required, they should refer to the relevant professionals or experts for advice on the use of the document. Enterprise Singapore shall not be liable for any damages whether directly or indirectly suffered by anyone or any organisation as a result of the use of any SS or TR.*
3. *Compliance with a SS or TR does not exempt users from any legal obligations.*



## **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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 3864-3 was prepared by Technical Committee 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 3864-3:2006), which has been technically revised.

ISO 3864 consists of the following parts, under the general title *Graphical symbols — Safety colours and safety signs*:

- *Part 1: Design principles for safety signs and safety markings*
- *Part 2: Design principles for product safety labels*
- *Part 3: Design principles for graphical symbols for use in safety signs*
- *Part 4: Colorimetric and photometric properties of safety sign materials*

This corrected version of ISO 3864-3:2012 incorporates the following corrections:

- Figure 13: The size of the lower graphical symbol has been corrected.
- Figure 14: The size of the lower graphical symbol has been corrected.
- Figure A.4: The human figures have been replaced with those drawn in accordance with the template in Figure A.3.
- Figure A.17: The figure has been enlarged.

## **Introduction**

Graphical symbols in safety signs are used for a wide range of purposes. There is a need to standardize the principles for creating these graphical symbols to ensure visual clarity, to maintain consistency, and thereby to improve recognition and comprehension. The principles set forth in this part of ISO 3864 are the design criteria by which graphical symbols are judged for standardization and publication in ISO 7010 and in ISO 20712-1.

Graphical symbols used in safety signs are not always intuitively understood. Often training needs to take place to inform people about the meaning of a graphical symbol. Such training can take place by including the meaning of a graphical symbol in operation manuals, company bulletins, training programme materials, as well as using supplementary text with the safety sign.

NOTE Information on procedures, criteria of acceptability, safety sign templates and application of safety signs is given on the website: <http://www.iso.org/tc145/sc2>.

## Graphical symbols — Safety colours and safety signs —

### Part 3: Design principles for graphical symbols for use in safety signs

**IMPORTANT** — The colours represented in the electronic file of this part of ISO 3864 can be neither viewed on screen nor printed as true representations. Although the copies of this part of ISO 3864 printed by ISO have been produced to correspond (with an acceptable tolerance as judged by the naked eye) to the requirements of ISO 3864-4, 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.

#### 1 Scope

This part of ISO 3864 gives principles, criteria and guidance for the design of graphical symbols for use in safety signs as defined in ISO 3864-1, and for the safety sign element of product safety labels as defined in ISO 3864-2.

#### 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.

ISO 3864-1:2011, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 3864-2, *Graphical symbols — Safety colours and safety signs — Part 2: Design principles for product safety labels*

ISO 3864-4:2011, *Graphical symbols — Safety colours and safety signs — Part 4: Colorimetric and photometric properties of safety sign materials*

ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 17724, *Graphical symbols — Vocabulary*

ISO 20712-1, *Water safety signs and beach safety flags — Part 1: Specifications for water safety signs used in workplaces and public areas*