

SINGAPORE STANDARD

# **SS 508 : Part 4 : 2008**

**ISO 3864-3 : 2006**

(ICS 01.080.01)

SPECIFICATION FOR

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

---

*Part 4 : Design principles for graphical  
symbols for use in safety signs*

Published by  
SPRING Singapore  
2 Bukit Merah Central  
Singapore 159835  
SPRING Singapore Website: [www.spring.gov.sg](http://www.spring.gov.sg)  
Standards Website: [www.standards.org.sg](http://www.standards.org.sg)

**SPRING**  
singapore  
Enabling Enterprise

SINGAPORE STANDARD

# **SS 508 : Part 4 : 2008**

**ISO 3864-3 : 2006**

(ICS 01.080.01)

SPECIFICATION FOR

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

---

*Part 4 : Design principles for graphical  
symbols for use in safety signs*

*All rights reserved. Unless otherwise specified, no part of this Singapore Standard may be reproduced or utilised in any form or by any means, electronic or mechanical, including photocopying and microfilming, without permission in writing from SPRING Singapore at the address below:*

Head  
Standardisation Department  
SPRING Singapore  
2 Bukit Merah Central  
Singapore 159835  
Telephone: 62786666    Telefax: 62786667  
Email: [stn@spring.gov.sg](mailto:stn@spring.gov.sg)

ISBN 981-4154-85-7

## Contents

	<b>Page</b>
National Foreword _____	6
Foreword _____	9
Introduction _____	10

## CLAUSES

1	Scope _____	11
2	Normative references _____	11
3	Terms and definitions _____	11
4	Designing graphical symbols for use in safety signs _____	12
5	Review of existing standards _____	12
6	Assignment of meaning, function and image content to the safety sign _____	12
7	Design criteria _____	13
7.1	Geometric shapes and colours of safety signs _____	13
7.2	Size and position of the graphical symbol _____	13
7.3	Layout of templates _____	16
7.4	Exclusive zone _____	17
7.5	Line width _____	20
7.6	Critical detail _____	20
7.7	Consistency within a family of graphical symbols _____	21
7.8	Determinants _____	22
7.9	Combination of graphical symbols or graphical symbol elements _____	24
7.10	Use of arrows in safety symbols _____	24
7.11	Characters _____	25

## ANNEX

A (informative) Additional design guidelines _____	26
Bibliography _____	35

## **National Foreword**

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

SS 508, which comes in four parts, replaces SS 217 : 1997 – ‘Industrial safety signs’ and SS 364 : 1993 – ‘Fire safety signs’.

The four parts under the general title ‘Specification for graphical symbols – Safety colours and safety signs’, to be read in conjunction, are as follows:

Part 1 : Design principles for safety signs in workplaces and public areas

Part 2 : Design principles for product safety labels

Part 3 : Safety signs used in workplaces and public areas.

Part 4 : Design principles for graphical symbols for use in safety signs

With SS 508, 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 : 2006 – ‘Graphical symbols – Safety colours and safety signs – Design principles for graphical symbols for use in safety signs’, published by the International Organisation for Standardisation. It is applicable to workplaces and all locations and all sectors where safety-related questions may be posed. However, it is not applicable to the signalling used for guiding rail, road, river, maritime and air traffic and, generally, to those sectors subject to a regulation which may differ. Additional symbols for labels for chemicals and dangerous goods may be found in The Globally Harmonised System of Classification and Labelling of Chemicals (<http://www.unece.org/trans/danger/publi/ghs/officialtext.html>), the UN Recommendations on the Transport Of Dangerous Goods Model Regulations ([http://www.unece.org/trans/danger/publi/unrec/rev13/13files\\_e.html](http://www.unece.org/trans/danger/publi/unrec/rev13/13files_e.html)) and Singapore regulations.

In preparing this standard, reference is also made to BS 5499-5 : 2002 – ‘Graphical symbols and signs – Safety signs, including fire safety signs – Part 5 : Signs with specific safety meanings’.

Acknowledgement is made for the use of information from the above references.

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 3864-4, 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 : 2002	SS 508 : Part 1 : 2004 – Specification for graphical symbols – Safety colours and safety signs – Design principles for safety signs in workplaces and public areas

ISO 3864-2 : 2004	SS 508 : Part 2 : 2008 – Specification for graphical symbols – Safety colours and safety signs – Design principles for product safety labels
ISO 7010 : 2003	SS 508 : Part 3 : 2004 – Specification for graphical symbols – Safety colours and safety signs – Safety signs used in workplaces and public areas
ISO 3864-3 : 2006	SS 508 : Part 4 : 2008 – Specification for graphical symbols – Safety colours and safety signs – Design principles for graphical symbols for use in safety signs

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

**NOTE**

1. *Singapore Standards are subject to periodic review to keep abreast of technological changes and new technical developments. The changes in Singapore Standards are documented through the issue of either amendments or revisions.*
2. *Compliance with a Singapore Standard does not exempt users from legal obligations.*

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



**COPYRIGHT PROTECTED DOCUMENT**

© ISO 2006 All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. + 41 22 749 01 11  
Fax + 41 22 749 09 47  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)  
Printed in Switzerland

## 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*.

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 in workplaces and public areas*
- *Part 2: Design principles for product safety labels*
- *Part 3: Design principles for graphical symbols for use in safety signs*

## **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 (details of the procedures for the standardization of graphical symbols and safety signs can be found at [www.iso.org/tc145](http://www.iso.org/tc145)).

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

## **Specification for graphical symbols — Safety colours and safety signs – Part 4 : 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 3864-1, it is not intended that these printed copies be used for colour matching. Instead consult ISO 3864-1 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 the safety sign element of product safety labels as defined in ISO 3864-2.