COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS AND ON THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS

Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals
(Second session, 12 -14 December 2001, agenda item 4)

COMMENTS ON THE GHS

Graphical symbols, safety identification, signs, shapes, symbols and colours, comprehensibility

Transmitted by the International Standardization Organization (ISO)

Addendum 2

Attached is draft standard ISO/DIS 3864-2

"Safety colours and safety signs – Part 2: Safety signs in workplaces and public areas - Overview of standardised safety signs.

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Safety colours and safety signs — Part 2: Safety signs in workplaces and public areas - Overview of standardised safety signs

Couleurs et signaux de sécurité — Partie 2 : Signaux de sécurité sur les lieux de travail et dans les lieux publics - Aperçu de signaux de sécurité normalisés

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Foreword

ISO (the International Organisation for Standardization) is a world-wide 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 3.

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.

International Standard ISO 3864-2 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 Safety colours and safety signs:

— Part 1: Safety signs in workplaces and public areas - Design principles
— Part 2: Safety signs in workplaces and public areas - Overview of standardized safety signs
— Part 3: Product safety labels - Design principles
Introduction

There is a need to standardize a system of giving safety information that relies as little as possible on the use of words to achieve understanding.

Continued growth in international trade, travel and more recently in the extensive mobility of labour requires a common method of communicating safety information.

Education is an essential part of any system that provides safety information.

Lack of standardization may lead to confusion and perhaps accidents.

The use of standardized safety signs does not replace proper work methods, instructions and accident prevention training and/or measures.

NOTE Some countries' statutory regulations may differ in some respect from those given in this International Standard.
Safety colours and safety signs — Part 2: Safety signs in workplaces and public areas - Overview of standardised safety signs

1 Scope

This International Standard prescribes safety signs for the purposes of accident prevention, fire protection, health hazard information and emergency evacuation.

The shape and colour that is required to be used for each sign as prescribed by ISO 3864-1 is given together with the graphical symbols contained within each sign.

This standard shall apply generally to all types of premises and other locations, particularly public areas and workplaces, and all premises where there is a requirement for safety information to be conveyed by means of safety signing.

It does not however, apply to signalling used for rail, road, maritime and air traffic, and in general to those sectors subject to a regulation that differs as regards to certain points of this document and those contained within ISO 3864-1.

ISO 3864-2 is intended to be used by all other Technical Committees within ISO charged to develop specific safety signing for their industry, to ensure that there is only one safety sign for each safety meaning.

This part of ISO 3846 comprises safety sign originals that may be scaled for reproduction and application purposes. It is intended that this standard will be continually amended and revised with safety signs standardized by ISO, applying the principles given in ISO 3864-1.

Safety signs given in this standard are considered to have achieved a satisfactory degree of comprehension as established by independent testing or as a result of their use and application at an international level.

The use of supplementary text signs in conjunction with these safety signs may be used to increase comprehension.

2 Definitions

For the purposes of this part of ISO 3864, the terms and definitions given in ISO 3864-1 and the following apply:

2.1 safety colour
colour of special properties to which a safety meaning is attributed

2.2 safety shape
geometric shape to which a safety meaning is attributed

2.3 safety symbol
graphical symbol used together with a safety colour and safety shape to form a safety sign
2.4 safety sign
sign which gives general safety information, obtained by a combination of a specific colour and geometric shape and which, by the addition of a graphical symbol, gives particular safety information

2.5 supplementary sign
sign used together with one of the safety signs which provides supplementary information

2.6 referent
subject represented by the graphical symbol

2.7 field of application
context in which the use of a graphical symbol or sign to convey a message is appropriate

2.8 application format
type of object on which the symbol or sign is intended to be used

2.9 image content
elements of the graphical symbol or sign and their relative juxtaposition

2.10 standard image content
image content as described for each referent in this standard

2.11 guide-line example
selected graphical interpretation of the graphical symbol or sign which conforms to the standard image content

3 Reference indexes

The following indexes are provided to facilitate the search for standardized safety symbols.

This standard will be maintained electronically with these indexes as the basis for the database and that each safety sign standardized will have a unique reference number.

3.1 Index by referent (safety meaning)
This index is in alphabetical order of the referent and provides the safety sign reference number (see table 1).

3.2 Index by functional reference number
This index is in numerical order within the different categories of safety signing according to their function (see table 1)

E is the category for means of escape and emergency equipment signs (safe condition signs)
F is the category for fire safety signs
M is the category for mandatory instruction and action safety signs
P is the category for prohibition safety signs
W is the category for warning safety signs
Table 1 — Reference indexes

<table>
<thead>
<tr>
<th>Index by referent (safety meaning)</th>
<th>Index by functional reference number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biological hazard, warning</td>
<td>W010</td>
</tr>
<tr>
<td>Direction, arrow (90° increments), safe condition</td>
<td>E005</td>
</tr>
<tr>
<td>Direction, arrow (45° increments), safe condition</td>
<td>E006</td>
</tr>
<tr>
<td>Drop (fall), warning</td>
<td>W009</td>
</tr>
<tr>
<td>Emergency exit (left hand)</td>
<td>E001</td>
</tr>
<tr>
<td>Emergency exit (right hand)</td>
<td>E002</td>
</tr>
<tr>
<td>Emergency telephone</td>
<td>E004</td>
</tr>
<tr>
<td>Explosive atmosphere, warning</td>
<td>W003</td>
</tr>
<tr>
<td>Explosive material, warning</td>
<td>W002</td>
</tr>
<tr>
<td>Fire alarm call point</td>
<td>F005</td>
</tr>
<tr>
<td>Fire emergency telephone</td>
<td>F006</td>
</tr>
<tr>
<td>Fire extinguisher</td>
<td>F001</td>
</tr>
<tr>
<td>Fire fighting equipment, collection of</td>
<td>F004</td>
</tr>
<tr>
<td>Fire hose reel</td>
<td>F002</td>
</tr>
<tr>
<td>Fire ladder</td>
<td>F003</td>
</tr>
<tr>
<td>First aid</td>
<td>E003</td>
</tr>
<tr>
<td>General mandatory sign</td>
<td>M001</td>
</tr>
<tr>
<td>General prohibition sign</td>
<td>P001</td>
</tr>
<tr>
<td>General warning sign</td>
<td>W001</td>
</tr>
<tr>
<td>Laser beam, warning</td>
<td>W005</td>
</tr>
<tr>
<td>Low temperature/freezing conditions, warning</td>
<td>W011</td>
</tr>
<tr>
<td>Magnetic field, warning</td>
<td>W007</td>
</tr>
<tr>
<td>Naked flames forbidden; fire, open ignition source and smoking prohibited</td>
<td>P003</td>
</tr>
<tr>
<td>No access for fork lift trucks and other industrial vehicles</td>
<td>P006</td>
</tr>
<tr>
<td>No access for persons with pacemakers</td>
<td>P007</td>
</tr>
<tr>
<td>No metallic articles or watches</td>
<td>P008</td>
</tr>
<tr>
<td>No smoking</td>
<td>P002</td>
</tr>
<tr>
<td>No thoroughfare</td>
<td>P004</td>
</tr>
<tr>
<td>Non-ionising radiation, warning</td>
<td>W006</td>
</tr>
<tr>
<td>Not drinking water</td>
<td>P005</td>
</tr>
<tr>
<td>Obstacles, warning</td>
<td>W008</td>
</tr>
<tr>
<td>Radioactive material, warning</td>
<td>W004</td>
</tr>
<tr>
<td>Slippery surface, warning</td>
<td>W012</td>
</tr>
</tbody>
</table>
3.3 Index of safety signs by category and reference number

The following is a graphical index of the standardised safety signs for public areas and workplaces, listed in terms of the five safety sign categories defined by geometric shape and colour as required by ISO 3864-1.

**Safe Condition Signs**

- E001
- E002
- E003
- E004
- E005
- E006

**Fire Safety Signs**

- F001
- F002
- F003
- F004
- F005
- F006

**Mandatory Action Signs**

- M001

**Prohibition Signs**

- P001
- P002
- P003
- P004
- P005
- P006
- P007
- P008

**Warning Signs**

- W001
- W002
- W003
- W004
- W005
- W006
- W007
- W008

- W009
- W010
- W011
4 Standardized safety signs

The following safety sign originals are provided in a uniform 75mm size with corner marks to enable accurate enlargement and reduction. The sign illustrations are shown without borders in order to allow for consistent reproduction scaling, though the use of borders is encouraged as defined by ISO 3864-1. The safety signs should be reproduced exactly as shown. However, some degree of graphical modification is permitted when cultural differences or special application formats must be considered, provided comprehension of the sign is maintained. Consistent reproduction and use of these safety signs is expected to lead to a progressively improved degree of comprehension at the international level.
E001
Referent
Emergency exit (left hand)
Function
To signify an escape route
Standard Image Content
Full view of man moving (to left) through doorway
Field of Application
Both for everyday use; Public places and in places of work
Safety: Safe condition
Format of Application
Safety signing
Supplementary arrow sign is used to give directional information (E005, E006)
Safety manuals and notices
To improve conspicuity, use with a supplementary sign
Additional Information
See ISO DIS 3864-1 for examples of use

E002
Referent
Emergency exit (right hand)
Function
To signify an escape route
Standard Image Content
Full view of man moving (to right) through doorway
Field of Application
Both for everyday use; public places and in places of work
Safety: Safe condition
Format of Application
Safety signing
Supplementary arrow sign is used to give directional information (E005, E006)
Safety manuals and notices
To improve conspicuity, use with a supplementary sign
Additional Information
See ISO DIS 3864-1 for examples of use
E003
Referent
First aid
Function
To signify the location of first aid equipment or facilities
Standard Image Content
A white cross on a green background or an alternative appropriate recognised ethnic device
Field of Application
For places of work, manufacturers and users
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension.

E004
Referent
Emergency telephone
Function
For summoning first aid or rescue
Standard Image Content
Telephone receiver in profile, with determinative cross or with another appropriate element, evocative for the targeted cultural group
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension.
**E005**

Referent  
Direction  
Function  
To indicate direction (the arrow may be rotated in increments of $90^\circ$ from the vertical)  
Standard Image Content  
Arrow with Belgian head, with angle at apex of between $84^\circ$ and $86^\circ$  
Field of Application  
Both for everyday use; Public places and in places of work  
Format of Application  
Safety signing as supplementary sign  
Safety manuals and notices  
Additional Information  
See ISO DIS 3864-1 supplementary sign

**E006**

Referent  
Direction  
Function  
To indicate direction (the arrow may be rotated in increments of $90^\circ$ from $45^\circ$)  
Standard Image Content  
Arrow with Belgian head, with angle at apex of between $84^\circ$ and $86^\circ$  
Field of Application  
Both for everyday use; Public places and in places of work  
Format of Application  
Safety signing as supplementary sign  
Safety manuals and notices  
Additional Information  
See ISO DIS 3864-1 supplementary sign
F001
Referent
Fire extinguisher
Function
To signify a fire extinguisher
Standard Image Content
Front view of fire extinguisher with determinative flames
Field of Application
Both for everyday use; Public places and places of work
Format of Application
Fire safety signing
Fire safety manuals and notices
Additional Information
ISO comprehension test series 1979/80 run by Easterby & Graydon, AP reports 99 & 100

F002
Referent
Fire hose reel
Function
To signify fire equipment
Standard Image Content
Fire hose reel in profile, with determinative flames
Field of Application
Both for everyday use; Public places and places of work
Format of Application
Fire safety signing
Fire safety manuals and notices
Additional Information
ISO comprehension test series 1979/80 run by Easterby & Graydon, AP reports 99 & 100
F003
Referent
Fire ladder
Function
To signify a fire ladder
Standard Image Content
Front view of vertical ladder, with determinative flames
Field of Application
Both for everyday use and places of work
Format of Application
Fire safety signing
Fire safety manuals and notices
Additional Information
ISO comprehension test series 1979/80 run by Easterby & Graydon, AP reports 99 & 100

F004
Referent
Collection of fire fighting equipment
Function
To signify a collection of fire fighting equipment
Standard Image Content
Fire helmet, with determinative flames
Field of Application
Both for everyday use and in places of work
Fire safety
Format of Application
Fire safety signing
Fire safety manuals and notices
Additional Information
ISO comprehension test series 1979/80 run by Easterby & Graydon, AP reports 99 & 100. The shape of the helmet may be changed to better represent a country’s style of fire helmet.
F005
Referent
Fire alarm call point
Function
To signify a fire alarm call point
Standard Image Content
Hand with projecting finger on push button of call point, with determinative flames
Field of Application
Both for everyday use; Public places and places of work
Fire safety
Format of Application
Fire safety signing
Fire safety manuals and notices
Additional Information
ISO comprehension test series 1979/80 run by Easterby & Graydon, AP reports 99 & 100

F006
Referent
Fire emergency telephone
Function
To signify fire emergency telephone
Standard Image Content
Telephone receiver shown in profile, with determinative flames
Field of Application
Both for everyday use; Public places and places of work
Fire safety
Format of Application
Fire safety signing
Fire safety manuals and notices
Additional Information
ISO comprehension test series 1979/80 run by Easterby & Graydon, AP reports 99 & 100
M001
Referent
General mandatory sign
Function
To signify a mandatory action
Standard Image Content
Exclamation mark
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Additional Information
Requires supplementary sign to give further information

P001
Referent
General prohibition sign
Function
To signify a prohibited action
Standard Image Content
None, prohibition shape and colour only
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Requires supplementary sign to give further information
P002
Referent
No smoking
Function
To prohibit the smoking of cigarettes, pipes, cigars etc
Standard Image Content
Cigarette shown in profile with smoke
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

P003
Referent
Naked flames forbidden
Fire, open ignition source and smoking prohibited
Function
To prohibit smoking and all forms of naked flame
Standard Image Content
Match shown as profile with flame
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension
P004
Referent
No thoroughfare
Function
To prohibit an unauthorised person from using a designated thoroughfare
Standard Image Content
Stylised man walking (left hand)
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

P005
Referent
Not drinking water
Function
To prohibit the drinking of unsuitable water
Standard Image Content
Tap above glass containing water indicated by wavy lines
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension
P006
Referent
No access for fork lift trucks and other industrial vehicles
Function
To prohibit the use of fork lift trucks and other industrial vehicles in hazardous areas
Standard Image Content
Truck shown as profile with stylised driver
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

P007
Referent
No access for persons with pacemakers
Function
To prohibit a person from passing through a device that might harm a pacemaker
Standard Image Content
Stylised heart shape with cable
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension
P008
Referent
No metallic articles or watches
Function
To prohibit metallic articles and watches in a designated area
Standard Image Content
Stylised face of an analog wristwatch and the flat side of a key
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

W001
Referent
General warning sign
Function
To signify a general warning
Standard Image Content
Exclamation mark
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Requires supplementary sign to give further information
W002
Referent
Warning: Explosive material
Function
To warn of a hazard or danger from explosive materials
Standard Image Content
Stylised exploding bomb
Field of Application
Both for everyday use; Public places and places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

W003
Referent
Warning: Radioactive material
Function
To warn of a hazard or danger from radioactive material
Standard Image Content
As abstract image shown opposite
Field of Application
Both for everyday use; Public places and places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension
W004
Referent
Warning; Laser beam
Function
To warn of a hazard or danger from a laser beam
Standard Image Content
As abstract image shown opposite
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

W005
Referent
Warning; Non-ionising radiation
Function
To warn of a hazard or danger from non-ionising radiation
Standard Image Content
As abstract image shown opposite
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension
W006
Referent
Warning: Magnetic field
Function
To warn of a hazard or danger from a magnetic field
Standard Image Content
Stylised magnet with two radiating arcs either side
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

W007
Referent
Warning: Obstacles
Function
To warn of a hazard or danger from obstacles
Standard Image Content
Stylised man tripping over floor obstacle
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension
W008
Referent
Warning; Drop (fall)
Function
To warn of a hazard or danger from a drop
Standard Image Content
Stylised man falling from the edge of a surface
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

W009
Referent
Warning; Biological hazard
Function
To warn of a hazard or danger from a biological hazard
Standard Image Content
As abstract image shown opposite
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension
W010
Referent
Warning; Low temperature/freezing conditions
Function
To warn of a hazard or danger from low temperature
Standard Image Content
As abstract image shown opposite
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text sign may be used to increase comprehension

W011
Referent
Warning; Slippery surface
Function
To warn of a hazard or danger from a slippery surface
Standard Image Content
Stylised man falling on a slippery surface
Field of Application
Both for everyday use; Public places and in places of work
Format of Application
Safety signing
Safety manuals and notices
Additional Information
Supplementary text may be used to increase comprehension