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**AMENDMENT 5**  
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## Graphical symbols — Safety colours and safety signs — Safety signs used in workplaces and public areas

### AMENDMENT 5

*Symboles graphiques — Couleurs de sécurité et signaux de sécurité —  
Signaux de sécurité utilisés sur les lieux de travail et dans les lieux  
publics*

AMENDEMENT 5



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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.

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.

Amendment 5 to ISO 7010:2003 was prepared by Technical Committee ISO/TC 145, *Graphical symbols*, Subcommittee SC 2, *Safety identification, signs, shapes, symbols and colours*.

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# Graphical symbols — Safety colours and safety signs — Safety signs used in workplaces and public areas

## AMENDMENT 5

**IMPORTANT** — The electronic file of this document contains colours which are considered to be useful for the correct understanding of the document. Users should consider printing this document using a colour printer. ISO 3864-1 provides colorimetric and photometric properties together with, as a guideline, references from colour order systems.

Add the following safety signs:

- M021: Disconnect before carrying out maintenance or repair
- P012: No heavy load
- W023: Warning; Corrosive substance
- W024: Warning; Crushing of hands
- W027: Warning; Optical radiation
- W028: Warning; Oxidizing substance

**Safety sign M021: Disconnect before carrying out maintenance or repair**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                    |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Referent</b><br><br><b>Disconnect before carrying out maintenance or repair</b>                                                                                                                                                                                                                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Function</b><br>To signify that the machine or the equipment, which is not connected to mains by a plug, has to be disconnected from all sources of power before carrying out maintenance or repair                                                                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Image content</b><br>Horizontal arrow pointing to the right; one vertical short thick line attached to a circle at the bottom with a longer thick line at an angle to the right attached to the top of the circle; a further thick line in the same plane as the lower one, separated from the line at an angle |
| <p><b>Hazard</b><br/>Machine or equipment running during maintenance or repair</p> <p><b>Human behaviour that is intended to be caused after understanding the safety sign's meaning</b><br/>Disconnecting the machine or equipment before carrying out maintenance or repair</p> <p><b>Human behaviour that is intended to be prevented</b><br/>Not disconnecting the machine or equipment before carrying out maintenance or repair</p> <p><b>Need</b><br/>People can be injured or killed when carrying out maintenance or repair to machines or equipment which have not been disconnected</p> <p><b>Related referents</b><br/>M006</p> <p><b>Field of application</b><br/>In workplaces, on products</p> <p><b>Format of application</b><br/>Safety signing, safety manuals and notices, product labelling</p> <p><b>Context of use</b><br/>On or near machines or equipment which need to be disconnected before being repaired or maintained</p> <p><b>Additional information</b><br/>Test data obtained according to ISO 9186-1 are not available. Consequently, a supplementary text sign shall be used to increase comprehension except when the safety sign is supplemented by manuals, instructions or training.</p> |                                                                                                                                                                                                                                                                                                                    |

## Safety sign P012: No heavy load

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>Reference No.</b><br><br><b>ISO 7010-P012</b>                                                                                                                |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Referent</b><br><br><b>No heavy load</b>                                                                                                                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Function</b><br>To prohibit the placing of heavy objects on a surface                                                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <b>Image content</b><br>Weight resting on the two parts of a line which is broken in the centre so that the two halves are separated and each inclines downward |
| <p><b>Hazard</b><br/>         Breakage due to heavy load</p> <p><b>Human behaviour that is intended to be caused after understanding the safety sign's meaning</b><br/>         Not placing any heavy objects on a surface</p> <p><b>Related referents</b><br/>         ISO 7010-P018, ISO 7010-P019</p> <p><b>Additional information</b><br/>         Test data obtained according to ISO 9186-1:2007 are not available. Consequently, a supplementary text sign shall be used to increase comprehension except when the safety sign is supplemented by manuals, instructions or training.<br/>         In spite of this, the following needs to be considered:<br/>         "Heavy" depends on the context of use and if it needs to be specified, a supplementary sign should be added stating the maximum permissible load, e.g. as follows: max. 100 kg.</p> |                                                                                                                                                                 |

**Safety sign W023: Warning; Corrosive substance**

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|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>Referent</b></p> <p><b>Warning; Corrosive substance</b></p>                                                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>Function</b></p> <p>To warn of a corrosive substance</p>                                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <p><b>Image content</b></p> <p>Human hand with indentation, two test tubes, four droplets, thick line with indentation</p> |
| <p><b>Hazard</b></p> <p>Corrosive substance</p> <p><b>Human behaviour that is intended to be caused after understanding the safety sign's meaning</b></p> <p>Taking care when handling corrosive substances</p> <p><b>Related referents</b></p> <p>—</p> <p><b>Additional information</b></p> <p>Test data obtained according to ISO 9186-1:2007 are not available. Consequently, a supplementary text sign shall be used to increase comprehension except when the safety sign is supplemented by manuals, instructions or training.</p> |                                                                                                                            |



## Safety sign W024: Warning; Crushing of hands

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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Referent</b><br><br><b>Warning; Crushing of hands</b>                                           |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Function</b><br>To warn of a closing motion of mechanical parts of equipment                    |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <b>Image content</b><br>Human hand between two horizontal lines, vertical arrow pointing downwards |
| <b>Hazard</b><br>Closing mechanical parts of equipment<br><b>Human behaviour that is intended to be caused after understanding the safety sign's meaning</b><br>Taking care to avoid injury to hands when in the vicinity of equipment with closing mechanical parts<br><b>Related referents</b><br>ISO 7010-W019<br><b>Additional information</b><br>Test data obtained according to ISO 9186-1:2007 are not available. Consequently, a supplementary text sign shall be used to increase comprehension except when the safety sign is supplemented by manuals, instructions or training. |                                                                                                    |