

ISO/~~DISPRF~~ 22578:2025(en)

ISO-/TC-145/SC-2/~~WG-7~~

Secretariat: DIN

Date: ~~2025-02-14~~

## Graphical symbols — Safety colours and safety signs — Natural disaster safety way guidance system

*Symboles graphiques — Couleurs de sécurité et signaux de sécurité — Système de guidage pour mise en sécurité en cas de catastrophe naturelle*

iTeh Standards  
(<https://standards.iteh.ai>)

Document Preview

**PROOF**

~~ISO/PRF 22578~~

<https://standards.iteh.ai/catalog/standards/iso/ae36df9b-7f59-4857-a924-df68255f3efa/iso-prf-22578>

© ISO 2025

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: + 41 22 749 01 11  
[Email](mailto:copyright@iso.org): copyright@iso.org  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# iTeh Standards (<https://standards.iteh.ai>) Document Preview

[ISO/PRF 22578](#)

<https://standards.iteh.ai/catalog/standards/iso/ae36df9b-7f59-4857-a924-df68255f3efa/iso-prf-22578>

## Contents

<b>Foreword</b> .....	<b>v</b>
<b>Introduction</b> .....	<b>vi</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Purpose and deployment</b> .....	<b>3</b>
<b>5 Planning natural disaster safety way guidance systems</b> .....	<b>3</b>
<b>6 Signs used in natural disaster safety way guidance systems</b> .....	<b>4</b>
<b>7 Structure of a natural disaster safety way guidance system</b> .....	<b>9</b>
<b>8 Bilingual signs</b> .....	<b>22</b>
<b>9 Identifiability and legibility of signs under daylight and night-time conditions</b> .....	<b>24</b>
<b>10 Installation of natural disaster safety way guidance systems</b> .....	<b>25</b>
<b>11 Repair, maintenance and inspection</b> .....	<b>27</b>
<b>Annex A (informative) Examples of installations of natural disaster safety way guidance systems</b> .....	<b>28</b>
<b>Annex B (informative) Distance factors and sizing visual elements</b> .....	<b>42</b>
<b>Annex C (informative) Daylight and night-time illumination conditions</b> .....	<b>46</b>
<b>Annex D (normative) Measurement of photopic luminance of phosphorescent components used in a natural disaster safety way guidance system</b> .....	<b>47</b>
<b>Bibliography</b> .....	<b>52</b>
<a href="https://standards.iteh.ai/catalog/standards/iso/ae36df9b-7f59-4857-a924-df68255f3efa/iso-prf-22578">https://standards.iteh.ai/catalog/standards/iso/ae36df9b-7f59-4857-a924-df68255f3efa/iso-prf-22578</a>	
<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>2</b>
<b>4 Purpose and deployment</b> .....	<b>3</b>
<b>5 Planning natural disaster safety way guidance systems</b> .....	<b>3</b>
<b>6 Signs used in natural disaster safety way guidance systems</b> .....	<b>4</b>
<b>6.1 Signs</b> .....	<b>4</b>
<b>6.2 Supplementary direction arrow signs</b> .....	<b>6</b>
<b>6.3 Supplementary symbols and suitability marking</b> .....	<b>7</b>
<b>7 Structure of a natural disaster safety way guidance system</b> .....	<b>8</b>
<b>7.1 Overview of structure</b> .....	<b>8</b>
<b>7.2 Warning signs</b> .....	<b>9</b>
<b>7.3 Evacuation plan signs</b> .....	<b>10</b>
<b>7.4 Evacuation route signs</b> .....	<b>12</b>
<b>7.5 Place of refuge signs</b> .....	<b>14</b>
<b>8 Bilingual signs</b> .....	<b>16</b>

9	Identifiability and legibility of signs under daylight and night-time conditions.....	17
10	Installation of natural disaster safety way guidance systems.....	18
10.1	General.....	18
10.2	Sign positioning.....	18
10.3	Durability.....	19
11	Repair, maintenance and inspection.....	19
Annex A (informative)	Examples of installations of natural disaster safety way guidance systems.....	21
Annex B (informative)	Distance factors and sizing visual elements.....	30
Annex C (informative)	Daylight and night-time illumination conditions.....	34
Annex D (normative)	Measurement of photopic luminance of phosphorescent components used in a natural disaster safety way guidance system.....	35
Bibliography	.....	40

iTeh Standards  
(<https://standards.itih.ai>)  
Document Preview

ISO/PRF 22578

<https://standards.itih.ai/catalog/standards/iso/ae36df9b-7f59-4857-a924-df68255f3efa/iso-prf-22578>

## 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 document 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](http://www.iso.org/directives)).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at [www.iso.org/patents](http://www.iso.org/patents). ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, 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 [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document 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 22578:2022) and ISO-22578-2:2024, which have been technically revised.

The main changes are as follows:

- ~~ISO-22578-2~~ has been incorporated as [Annex D](#).

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## **Introduction**

There is a need to standardize a system for giving safety information related to evacuation to safety evacuation areas in the event of natural disasters that relies as little as possible on the use of words to achieve understanding.

It is extremely important for people who do not understand the local language to figure out the evacuation route instantly when they encounter a natural disaster in a foreign country.

This document reflects best practice; the illustrations show installation practice designed to provide the optimum amount of information to clearly identify the hazards of different types of natural disaster in order to direct evacuation by the appropriate location of evacuation route signs and evacuation plan signs, and the selection of places of refuge.

International travel increases the need for standardized methods of safety communication. A standardized method of signing with the use of appropriate supplementary signs and text throughout the public environment assists the process of education and instruction on the meaning of the evacuation route signs and place of refuge signs, and the appropriate actions to take.

The illustrations within this document are based on the assumption that people might be unfamiliar with the features of the natural disaster or the location of places of refuge.

It is important that the application of safety way guidance systems is standardized to aid comprehension. While education in the comprehension of the signs and evacuation plan signs is essential, incomprehension caused by lack of standardization can lead to confusion and possibly hinder effective evacuation.

This document does not purport to include all the necessary aspects or requirements of the design of a natural disaster safety way guidance system. Users are responsible for its correct application.

[ISO/PRF 22578](#)

<https://standards.iteh.ai/catalog/standards/iso/ae36df9b-7f59-4857-a924-df68255f3efa/iso-prf-22578>

# Graphical symbols — Safety colours and safety signs — Natural disaster safety way guidance system

**IMPORTANT** — The colours represented in the electronic file of this document can be neither viewed on screen nor printed as true representations. For the purposes of colour matching see ISO 3864-4, which provides colorimetric and photometric properties together with, as a guideline, references from colour order systems.

## 1 Scope

This document specifies the principles governing the design and application of signs and plans used to create a natural disaster safety way guidance system to help people evacuate to safe areas or places of refuge in case of natural disasters (e.g. tsunamis, floods, debris flows, steep slope failures, landslides, tornados, large-scale fires, active volcanoes).

This document provides guidance on the selection and use of safety signs conforming to ISO 7010, public information symbols conforming to ISO 7001, and text on evacuation route signs, places of refuge signs and evacuation plan signs for information related to one or more particular natural disasters. Guidance on the design, location, mounting positions and maintenance of the sign components of a natural disaster safety way guidance system is also provided.

This document does not apply to the determination of the need for natural disaster safety way guidance. This document assumes that the risk assessment or requirements of an enforcing authority have established the need for such natural disaster safety way guidance systems.

This document is not applicable to the particular hazards of high winds, snow avalanches, earthquakes or hurricanes, which cause the natural disasters covered in this document.

This document is applicable to safety way guidance from natural disasters from the outside of buildings to safe areas. ISO 16069 is applicable to safety way guidance within a building to the emergency exit(s).

## 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 7010,<sup>1</sup> *Graphical symbols — Safety colours and safety signs — Registered safety signs*

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

ISO 3864-3, *Graphical symbols — Safety colours and safety signs — Part 3: Design principles for graphical symbols for use in safety signs*

<sup>1</sup> The graphical symbol collections of ISO 7010 and ISO 16069 can be previewed and purchased on the Online Browsing Platform (OBP), [www.iso.org/obp](http://www.iso.org/obp).