INTERNATIONAL STANDARD

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# Societal security — Emergency management — Guidelines for colour-coded alerts

*Sécurité sociétale — Gestion des urgences — Lignes directrices relatives aux alertes à code couleur*



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# Foreword

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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 documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information



The committee responsible for this document is ISO/TC 292, *Security*.



 

# Introduction

People may be faced in their daily lives with various kinds of risks. People at risk should be able to take appropriate safety actions when faced with hazards even though they may not have a full understanding of them.

Public warnings, through a combination of prior notifications and alerts, enable people at risk to take appropriate and timely actions to protect their safety.

Colour-coded alerts are used to notify people at risk of status changes on a safety or danger continuum in allowing them to take appropriate actions.

This International Standard will lead to better understanding of colour-coded alerts by reducing confusion and prompting more appropriate responses in an emergency situation.

# Societal security — Emergency management — Guidelines for colour-coded alerts

## 1 Scope

This International Standard provides guidelines for the use of colour codes to inform people at risk as well as first response personnel about danger and to express the severity of a situation. It is applicable to all types of hazard in any location.

This International Standard does not cover the method for displaying colour codes, detailed ergonomic considerations related with viewing displays, or safety signs covered by ISO 3864-1.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*



ISO 22322, *Societal security — Emergency management — Guidelines for public warning*



## 3 Terms and definitions



For the purposes of this document, the terms and definitions given in ISO 22300 and the following apply.

NOTE All terms and definitions contained in ISO 22300 are available on the ISO Online Browsing Platform: www.iso.org/obp.

**3.1**
**alert**
part of public warning that captures attention of first responders and people at risk in a developing emergency situation

[SOURCE: ISO 22322, definition 3.1]

**3.2**
**colour blindness**
total or partial inability to differentiate certain hues

[SOURCE: ISO 5492:2008, definition 2.34]

**3.3**
**colour-code**
set of colours used symbolically to represent particular meanings

[SOURCE: ISO 17724:2003, definition 11]

**3.4**
**hue**
attribute of a visual sensation according to which an area appears to be similar to one of the perceived colours, red, yellow, green, and blue, or to a combination of two of them

[SOURCE: ISO/IEC 8632-1:1999, definition 4.1.61]

# 4 Guidance for use of colour codes

## 4.1 General

Red, yellow and green (and the spectrum in between in terms of hue) should be used to express the status of a hazard. Black, purple, blue and grey should be used to give supplementary information about the hazard.

## 4.2 Colour codes to express the status of hazard

### 4.2.1 General

**Red** is associated with danger and should be used to notify people at risk to take appropriate safety actions immediately.

**Yellow** is associated with caution and should be used to notify people at risk to prepare to take appropriate safety actions.

**Green** is associated with a safe status and should be used to notify people at risk that no action is required.

This International Standard does not define danger, caution or safety other than the suggested meaning given in Table 1.

Experts should classify the status of hazard into danger, caution or safe.



**Table 1 — Colour codes**

| Colour | Associated meaning | Proposed action |
|---|---|---|
| Red | Danger | Take appropriate safety action immediately |
| Yellow | Caution | Prepare to take appropriate safety action |
| Green | Safe | No action required |



### 4.2.2 Typical colours for colour-coding system

If more than three colours are needed to express the level of hazard, the colours and supporting information should be based on the following:

— the number of level of hazard should be minimized in order to limit the number of colours being used;

— hues between the red and green spectrum should be chosen;

— no more than seven colours should be used to avoid confusion;

— supporting information, which is understandable by users, should be added, including:

  — supplemental information (e.g. text, numbers, shape, symbol, size);

  — positional coding.

Figure 1 illustrates the different colours which can be used in colour code systems.

The colours in Figure 1 are indicative and should not be used for colour matching.

Annex B gives recommendations on colour specifications based on Munsell, CMYK, and RGB systems.

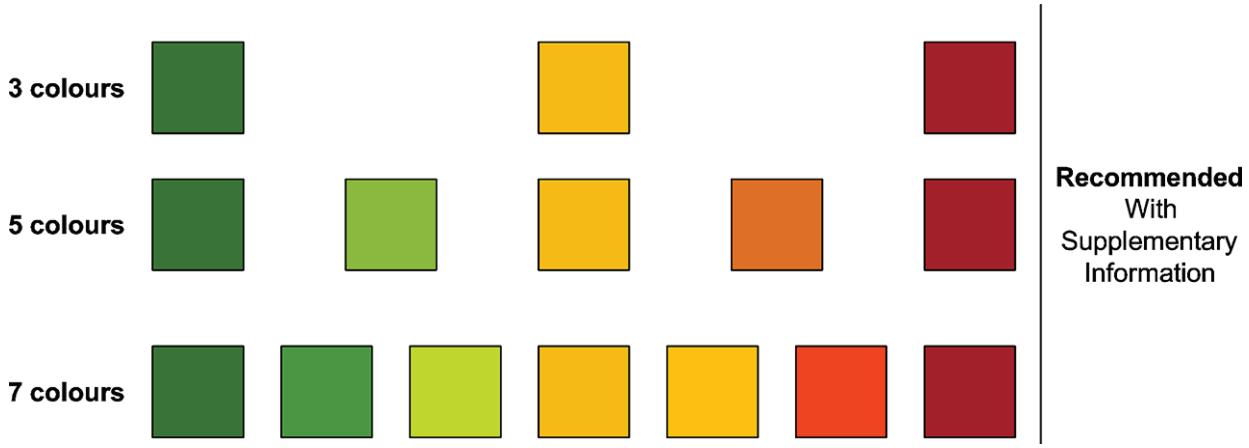


**Figure 1 — Guideline for use of basic colours**

### 4.2.3 Order and position for the red, yellow and green spectrum

The order of colours can provide positional cues so that people can easily recognize the meaning of the alert.

There are several ways to show and use the spectrum of red, yellow and green (see Figure 2). However, these colours should always be placed in a certain order where the increasing level of hazard is presented:



— from left to right, or

— from bottom to top.



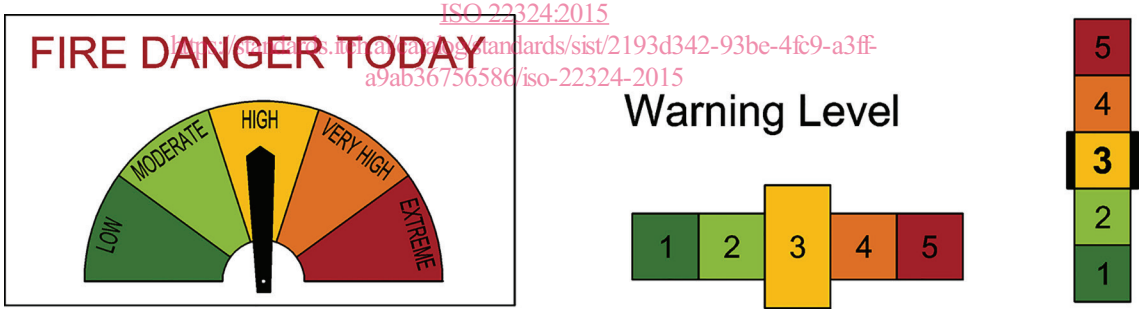


**Figure 2 — Example of the order and position of colour-coding**

## 4.3 Colour codes to give supplementary information

### 4.3.1 General

In addition to the red, yellow, green spectrum, black, purple, blue and grey may be used to provide additional information.

Annex B gives recommendations on colour specifications based on Munsell, CMYK, and RGB systems.