



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 37230-2018

**Societal security -- Emergency management -- Guidelines for
colour coded alerts**

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1 Scope

This Standard specifies the colors and their coding that express the degree of hazards in emergency early warnings, as well as the basic requirement for the consideration of factors like color blindness.

This Standard provides guidelines for the use of early warning colors to express the severity of dangerous situations for people at risk and emergency responders. This Standard is applicable to early warning of any type of emergencies occurring in any place.

This Standard does not include method of displaying colors or detailed ergonomic factors related to visual display. It does not involve the safety signs specified in GB/T 2893.1-2013.

2 Normative References

The following documents are indispensable to the application of this document. In terms of references with a specified date, only versions with a specified date are applicable to this document. In terms of references without a specified date, the latest version (including all the modifications) is applicable to this document.

GB/T 2893.1-2013 Graphical Symbols - Safety Colors and Safety Signs - Part 1:

Design Principles for Safety Signs and Safety Markings (ISO 3864-1:2011, MOD)

ISO 22300 Security and Resilience - Vocabulary

3.1 Terms and Definitions

What is defined in ISO 22300, and the following terms and definitions are applicable to this document.

3.1.1 Early-warning

Early-warning is a behavior of sending emergency signals to the public and relevant departments before the occurrence of the emergency and in accordance with the rules summarized in the past or the possible omens obtained through observations, to report dangerous situations and prevent the hazards from occurring without sufficient knowledge or preparation, so as to minimize the loss caused by the hazards.

3.1.2 Alert

As part of early warning, alert sends reports or signals of critical situations to the public and emergency responders who are about to be or are already at risk.

NOTE 1: generally speaking, equipment like radios, sirens and horns are used to send out acoustical signals with special meanings for emergency notification of major catastrophic events (such as: air defense, earthquake and tsunami, etc.).

NOTE 2: definition 3.1 of ISO 22332 is modified.

3.1.3 Color blindness

Color blindness means that the ability to distinguish specific colors is completely or partially missing.

[GB/T 10221-2012, Definition 3.34]

3.1.4 Color-code

Color-code refers to a set of symbolic colors used to express a specific meaning.

[ISO 17724:2003, Definition 11]

3.1.5 Hue

Hue represents the characteristics of colors like red, yellow, green, blue and purple, etc. It is one of the three attributes of color.

[GB/T 15608-2006, Definition 3.15]

3.2 Abbreviations

The following abbreviations are applicable to this document.

CMYK: C---cyan; M---magenta; Y---yellow; K---key plate.

RGB: R---red; G---green; B---blue.

4.1 Rating

In accordance with the degree of possible hazards, urgency and development of emergencies, there are generally four levels: Level-I (particularly severe), Level-II Bibliography [1] GB/T 2893.4-2013 Graphical Symbols - Safety Colors and Safety Signs - Part 4:

Colorimetric and Photometric Properties of Safety Sign Materials [2] GB/T 10221-2012 Sensory Analysis - Vocabulary [3] GB/T 15121.1-1994 Information Processing Systems - Computer Graphics -Metafile for Storage and Transfer of Picture Description Information - Part 1: Functional Specification [4] GB/T 15565 (all parts) Graphical Symbols - Terms [5] GB/T 18978 (all parts) Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs)

[6] GB/T 27962-2011 Graphical Symbols for Meteorological Disaster Warning Signal Icon [7] ISO 9241 Ergonomic Requirements for Office Work with Visual Display Terminals (VDTs)

[8] ISO 22320-2011 Societal Security - Emergency Management - Requirements for Incident Response [9] ISO 22322 Societal Security - Emergency Management - Guidelines for Public Warning [10] ISO/IEC Guide 71:2001 Guidelines for Standards Developers to Address the Needs of Older Persons and Persons with Disabilities [11] ISO/TR 22411 Ergonomics Data and Guidelines for the Application of ISO/IEC Guide 71 to Products and Services to Address the Needs of Older Persons and Persons with Disabilities [12] JIS S 0033:2006 Guidelines for the Elderly and People with Disabilities - Visual Signs and Displays - A Method for Color Combinations Based on Categories of Fundamental Colors as a Function of Age [13] Berlin and Kay. Basic Color Terms: Their Universality and Evolution (The David Hume Series). Cambridge University Press, 1999 [14] International Atomic Energy Agency (IAEA). The International Nuclear and Radiological Event Scale User's Manual - 2008 Edition, Vienna: 2009 _____ END _____