INTERNATIONAL STANDARD

ISO 20560-2

First edition
2023-03

Safety information for the content of piping systems and tanks —

Part 2: **Tanks**

Consignes de sécurité concernant le contenu des tuyauteries et des réservoirs —

Partie 2: Réservoirs

Reference number
ISO 20560-2:2023(E)

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Published in Switzerland

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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.

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 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

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.

This document was prepared by Technical Committee ISO/TC 145, *Graphical symbols*, Subcommittee SC 2, *Safety identification, signs, shapes, symbols and colours*.

A list of all parts in the ISO 20560 series can be found on the ISO website.

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.

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Introduction

Continuous growth in mobility of labour has resulted in a need to standardize a safety information system and form a coherent system for non-verbal exchange of information that consists of distinct elements to identify hazards related to the content of piping systems and tanks. Every element of the safety information system defined in this document communicates specific information. When combined on tanks, these elements inform the viewer, in a unique and simplified way, of potential hazards so accidents can be prevented and an appropriate response to emergency situations can be efficiently accomplished.

The use of this document is expected to reduce risk by providing a means of improved training and education to reduce possible confusion for people working with and near tanks in both normal and emergency situations.

The use of a standardized safety information system does not replace proper work methods, instructions or accident-prevention training or measures. Education is an essential part of any system that provides safety information.

NOTE Some countries' statutory regulations possibly differ in some respect from the requirements given in this document.

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Safety information for the content of piping systems and tanks —

Part 2: Tanks

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 20560-1:2020, Annex A, which provides references from colour order systems.

1 Scope

This document specifies a safety information system for tanks made by combining several elements onto a single marking to communicate health and hazard safety information and information in case of an emergency for the purpose of accident prevention.

The organization's risk assessment will determine when and where this safety information system for tanks will be used. Possible applications include, but are not limited to:

— markings installed on or near fixed above-ground tanks;

— markings installed on portable tanks;

— markings installed on or near tanks used in production facilities, marine structures and ships;

— markings posted on or near interchangeable containers with fixed connection;

— markings installed on or near overground elements of underground tanks.

This document establishes additional principles to ISO 3864-1 for the purpose of establishing design principles for the display of safety information on tanks typically found in workplaces, industry and other facilities with tanks and containers. It covers safety information for tanks only. It is not intended for use on products.

This document does not cover tanks that are moved or transported. It does not apply to the labelling according to the United Nations' *Globally harmonized system of classification and labelling of chemicals (GHS)*.[5]

Safety signing of the hazards in an area is not part of this document.

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 3864-1:2011, *Graphical symbols — Safety colours and safety signs — Part 1: Design principles for safety signs and safety markings*

ISO 7010, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 20560-1:2020, *Safety information for the content of piping systems and tanks — Part 1: Piping systems*

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3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 20560-1 and the following apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1
GHS hazard pictogram
graphical composition defined by the United Nations' *Globally harmonized system of classification and labelling of chemicals (GHS)*[5] that can include a symbol plus other graphic elements, such as a border, background pattern or colour, intended to convey specific information as given by the GHS

3.2
safe observation distance
minimum observation distance to avoid harm in the event of potentially damaging or emergency situations

Note 1 to entry: The safe observation distance is determined as part of the risk assessment.

3.3
safety data sheet
SDS
standardized information template for a medium which identifies the medium and contains information about its potential health, physical and chemical hazards, and emergency and firefighting procedures

3.4
safety information system
series of markings that consistently uses standardized elements to visually communicate information necessary for reliable recognition, identification and understanding of hazards

3.5
warning sign
safety sign that indicates a specific source of potential harm

[SOURCE: ISO 3864-1:2011, 3.16]

4 General requirements

A safety information system for tanks visually communicates information necessary for the reliable recognition, identification and understanding of any hazard related to the type and character of the content of a tank. This safety information system shall be installed on site and near any place that might require operation, maintenance or manipulation of a tank's contents, or intervention in the case of an emergency situation.

This safety information system provides critical information that serves to assist in:

— the correct operation and use of tanks;

— the safe maintenance of the tanks;

— conveying critical information to trained personnel in emergency situations.

The safety information system shall, in a comprehensive and uniform manner, accurately identify the contents and hazards associated with the contents of tanks in conformity with the contents' safety data sheets (SDSs). In some cases, the safety information system shall provide, in an integrated, coherent visual manner, specific hazard information related to the tank's contents. Examples of this information

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