



**NSAI**  
Standards

Irish Standard  
I.S. EN ISO 13338:2020

Gas cylinders - Gases and gas mixtures -  
Determination of tissue corrosiveness for  
the selection of cylinder valve outlets (ISO  
13338:2017)

**I.S. EN ISO 13338:2020**

*Incorporating amendments/corrigenda/National Annexes issued since publication:*

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## National Foreword

I.S. EN ISO 13338:2020 is the adopted Irish version of the European Document EN ISO 13338:2020, Gas cylinders - Gases and gas mixtures - Determination of tissue corrosiveness for the selection of cylinder valve outlets (ISO 13338:2017)

This document does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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*In line with international standards practice the decimal point is shown as a comma (,) throughout this document.*

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EUROPEAN STANDARD

EN ISO 13338

NORME EUROPÉENNE

EUROPÄISCHE NORM

October 2020

ICS 71.100.20

English Version

## Gas cylinders - Gases and gas mixtures - Determination of tissue corrosiveness for the selection of cylinder valve outlets (ISO 13338:2017)

Bouteilles à gaz - Gaz et mélanges de gaz -  
Détermination de la corrosivité sur les tissus pour le  
choix des raccords de sortie de robinets (ISO  
13338:2017)

Gasflaschen - Gase und Gasgemische - Bestimmung der  
Gewebekorrosivität von Gasen oder Gasgemischen für  
die Auswahl von Ventilausgängen (ISO 13338:2017)

This European Standard was approved by CEN on 28 September 2020.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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**EN ISO 13338:2020 (E)**

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## **European foreword**

The text of ISO 13338:2017 has been prepared by Technical Committee ISO/TC 58 "Gas cylinders" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 13338:2020 by Technical Committee CEN/TC 23 "Transportable gas cylinders" the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2021, and conflicting national standards shall be withdrawn at the latest by April 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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## **Endorsement notice**

The text of ISO 13338:2017 has been approved by CEN as EN ISO 13338:2020 without any modification.

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# INTERNATIONAL STANDARD

**ISO**  
**13338**

Second edition  
2017-05

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## **Gas cylinders — Gases and gas mixtures — Determination of tissue corrosiveness for the selection of cylinder valve outlets**

*Bouteilles à gaz — Gaz et mélanges de gaz — Détermination de la corrosivité sur les tissus pour le choix des raccords de sortie de robinets*



Reference number  
ISO 13338:2017(E)

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**ISO 13338:2017(E)**



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## ISO 13338:2017(E)

### 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](http://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](http://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 on 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 the following URL: [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 58, *Gas cylinders*, Subcommittee SC 2, *Cylinder fittings*.

This second edition cancels and replaces the first edition (ISO 13338:1995), which has been technically revised with the following change:

- [Clauses 3, 4](#) and [5](#) have been updated.

## **Introduction**

ISO 5145 specifies the dimensions of different valve outlets for different compatible gas groups. These compatible gas groups are determined according to practical criteria defined in ISO 14456.

These criteria are based on certain physical, chemical, toxic and corrosive properties of the gases. In particular, the tissue corrosiveness is considered in this document.

The aim of this document is to assign a classification category for each gas that takes into account the corrosiveness for skin, eyes and the respiratory tract of the gas.

For gas mixtures containing corrosive components, a calculation method based on the additivity method of the GHS is proposed.

However, for gas mixtures containing corrosive gas components, some valve outlets standards require the use of the corrosive category regardless of the corrosive gas concentration.



# Gas cylinders — Gases and gas mixtures — Determination of tissue corrosiveness for the selection of cylinder valve outlets

## 1 Scope

This document provides:

- for pure gases and some liquids, a complete list indicating their corrosiveness;
- for gas mixtures, a calculation method, in the absence of experimental data, relating to the corrosiveness of each of their components;

in order to determine the corrosiveness of gases and gas mixtures on tissue so that a suitable outlet connection can be assigned to each of them.

## 2 Normative references

There are no normative references in this document.

## 3 Terms, definitions and symbols

### 3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

#### 3.1.1

##### **tissue corrosiveness of gases or gas mixtures**

ability of a gas to damage or destroy living tissues (eyes, skin and mucous membranes)

Note 1 to entry: It corresponds to GHS hazard category skin corrosion 1, 1A, 1B or 1C or GHS hazard category eye damage 1.

#### 3.1.2

##### **irritant gas**

gas which may cause a temporary reaction to the skin, eyes and mucous membranes

Note 1 to entry: It corresponds to GHS hazard category skin irritation 2 or GHS hazard category eye irritation 2.

Note 2 to entry: An irritant gas is regarded for the purposes of ISO 14456 as non-corrosive.

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