

STN	Fľaše na plyn Plyny a zmesi plynov Stanovenie potenciálnej horľavosti a oxidačnej schopnosti na výber výstupov ventilov fliaš (ISO 10156: 2017)	STN EN ISO 10156 07 8613
------------	--	--

Gas cylinders - Gases and gas mixtures - Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets (ISO 10156:2017)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/18

Obsahuje: EN ISO 10156:2017, ISO 10156:2017

Oznámením tejto normy sa ruší
STN EN ISO 10156 (07 8613) z augusta 2010

125899

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2018
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

EN ISO 10156

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2017

ICS 23.020.35; 71.100.20

Supersedes EN ISO 10156:2010

English Version

Gas cylinders - Gases and gas mixtures - Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets (ISO 10156:2017)

Bouteilles à gaz - Gaz et mélanges de gaz -
Détermination du potentiel d'inflammabilité et
d'oxydation pour le choix des raccords de sortie de
robinets (ISO 10156:2017)

Gasflaschen - Gase und Gasgemische - Bestimmung der
Brennbarkeit und des Oxidationsvermögens zur
Auswahl von Ventilausgängen (ISO 10156:2017)

This European Standard was approved by CEN on 19 August 2017.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents	Page
European foreword.....	3

European foreword

This document (EN ISO 10156:2017) has been prepared by Technical Committee ISO/TC 58 “Gas cylinders” in collaboration with 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 February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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.

This document supersedes EN ISO 10156:2010.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Endorsement notice

The text of ISO 10156:2017 has been approved by CEN as EN ISO 10156:2017 without any modification.

Gas cylinders — Gases and gas mixtures — Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets

Bouteilles à gaz — Gaz et mélanges de gaz — Détermination du potentiel d'inflammabilité et d'oxydation pour le choix des raccords de sortie de robinets





COPYRIGHT PROTECTED DOCUMENT

© ISO 2017, Published in Switzerland

All rights reserved. Unless otherwise specified, 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
Ch. de Blandonnet 8 • CP 401
CH-1214 Vernier, Geneva, Switzerland
Tel. +41 22 749 01 11
Fax +41 22 749 09 47
copyright@iso.org
www.iso.org

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms, definitions, symbols and units	1
4 Flammability of gases and gas mixtures in air	3
4.1 General.....	3
4.2 Test method.....	3
4.2.1 Key points concerning safety.....	3
4.2.2 Principle.....	4
4.2.3 Test apparatus and materials.....	4
4.2.4 Procedure for determination of flammability.....	5
4.2.5 Procedure for determination of flammability limits.....	5
4.2.6 Results for pure gases.....	5
4.3 Calculation method for flammability of gas mixtures containing n flammable gases and p inert gases.....	8
4.4 Examples.....	11
4.5 Calculation method for lower flammability limit of gas mixtures.....	12
4.5.1 General.....	12
4.5.2 Mixtures of flammable gases and mixtures of flammable gases with nitrogen and/or air.....	13
4.5.3 Mixtures of flammable gases with inert gases other than nitrogen and air.....	13
4.6 Examples.....	13
4.7 Classification according to the Globally Harmonized System (GHS).....	15
5 Oxidizing power of gases and gas mixtures	15
5.1 General.....	15
5.2 Test method.....	15
5.2.1 Key points concerning safety.....	15
5.2.2 Principle.....	15
5.2.3 Test apparatus.....	16
5.2.4 Procedure.....	19
5.2.5 Results.....	19
5.3 Calculation method.....	19
5.3.1 Principle.....	19
5.3.2 C_i coefficients.....	20
6 Mixtures containing oxygen and flammable gases	21
6.1 General.....	21
6.2 Basis of flammability classification.....	22
6.3 Examples.....	24
Annex A (informative) Classification according to the Globally Harmonized System (GHS)	26
Bibliography	27

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 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.

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

This fourth edition cancels and replaces the third edition (ISO 10156:2010), which has been technically revised. It also incorporates ISO 10156:2010/Cor 1:2010.

The main changes compared to the previous edition are as follows:

- [4.1](#), [4.2.5](#) and [4.4](#) have been technically revised;
- [4.5](#) and [4.6](#) have been added.

Introduction

ISO 5145 specifies the dimensions of different cylinder 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 flammability in air and the oxidizing ability are considered in this document.

One of the potential complications that prompted the development of this document is that while there are abundant data in the literature relating to pure gases, differences can be found, depending upon the test methods employed. In the case of gas mixtures, data in the literature are often incomplete or even non-existent.

The initial aim of this document was to eliminate the ambiguities in the case of differences in the literature, and above all, to supplement existing data (mainly in the case of gas mixtures).

Subsequently, this document was used for other purposes than the selection of cylinder valve outlets, such as establishing flammability and oxidizing potential data for the classification and labelling of gases and gas mixtures.

This document is intended to be used under a variety of national regulatory regimes, but has been written so that it is suitable for the application of the UN Model Regulations and the UN-GHS^[9].

Gas cylinders — Gases and gas mixtures — Determination of fire potential and oxidizing ability for the selection of cylinder valve outlets

1 Scope

This document specifies methods for determining whether or not a gas or gas mixture is flammable in air and whether a gas or gas mixture is more or less oxidizing than air under atmospheric conditions.

This document is intended to be used for the classification of gases and gas mixtures including the selection of gas cylinder valve outlets.

This document does not cover the safe preparation of these mixtures under pressure and at temperatures other than ambient.

2 Normative references

There are no normative references in this document.

koniec náhľadu – text ďalej pokračuje v platenej verzii STN