

**Gaasid ja gaaside segud. Tuleohtlikkuse ja oksüdeerimisvõime määramine balloone väljalaskeventiilide valikuks**

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

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN ISO 10156:2010 sisaldab Euroopa standardi EN ISO 10156:2009 ingliskeelset teksti.

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English Version

Gases and gas mixtures - Determination of fire potential and  
oxidizing ability for the selection of cylinder valve outlets (ISO  
10156:2010)

Gaz et mélanges de gaz - Détermination du potentiel  
d'inflammabilité et d'oxydation pour le choix des raccords  
de sortie de robinets (ISO 10156:2010)

Gase und Gasgemische - Bestimmung der Brennbarkeit  
und des Oxidationsvermögens zur Auswahl von  
Ventilausgängen (ISO 10156:2010)

This European Standard was approved by CEN on 18 March 2010.

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## Foreword

This document (EN ISO 10156:2010) 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of an identical text or by endorsement, at the latest by October 2010, and conflicting national standards shall be withdrawn at the latest by October 2010.

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### Endorsement notice

The text of ISO 10156:2010 has been approved by CEN as a EN ISO 10156:2010 without any modification.

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## Introduction

ISO 5145 <sup>[1]</sup> and other related standards establish practical criteria for the determination of outlet connections of cylinder valves. These criteria are based on certain physical and chemical properties of the gases. In particular, the flammability in air and the oxidizing ability are considered.

One of the potential complications that prompted the development of this International Standard is that whilst 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 International Standard 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 International Standard was used for other purposes than the selection of cylinder valve outlets, such as establishing flammability and oxidizing potential data for labelling according to international transport regulations and dangerous substances regulations, under the umbrella of the Globally Harmonized System (GHS).

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

## 1 Scope

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

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

## 2 Terms, definitions, symbols and units

### 2.1 Terms and definitions

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

#### 2.1.1

##### **gas or gas mixture flammable in air**

gas or gas mixture that is ignitable in air at atmospheric pressure and a temperature of 20 °C

#### 2.1.2

##### **lower flammability limit in air**

minimum content of a gas or gas mixture in an homogeneous mixture with air at which a flame just starts to propagate

NOTE 1 The lower flammability limit is determined at atmospheric conditions.

NOTE 2 The term “flammability limit”, as used in this International Standard, is sometimes called “explosion limit”.

#### 2.1.3

##### **upper flammability limit in air**

maximum content of a gas or gas mixture in an homogeneous mixture with air at which a flame just starts to propagate

NOTE 1 The upper flammability limit is determined at atmospheric conditions.

NOTE 2 The term “flammability limit”, as used in this International Standard, is sometimes called “explosion limit”.

#### 2.1.4

##### **flammability range**

range of concentration between the lower and upper flammability limits

NOTE The term “flammability range”, as used in this International Standard, is sometimes also called “explosion range”.