

Determination of the limiting oxygen concentration (LOC) for flammable gases and vapours

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EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 14756:2006 sisaldab Euroopa standardi EN 14756:2006 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 21.12.2006 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 14756:2006 consists of the English text of the European standard EN 14756:2006.</p> <p>This document is endorsed on 21.12.2006 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p>Käsitlusala: This European Standard specifies the method for determining the LOC of mixtures consisting of flammable gas or vapour, air and inert gas at atmospheric pressure and temperatures from ambient temperature to 200 °C.</p>	<p>Scope: This European Standard specifies the method for determining the LOC of mixtures consisting of flammable gas or vapour, air and inert gas at atmospheric pressure and temperatures from ambient temperature to 200 °C.</p>
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ICS 13.230

Võtmesõnad:

ICS 13.230

English Version

Determination of the limiting oxygen concentration (LOC) for flammable gases and vapours

Détermination de la concentration limite en oxygène (CLO)
des gaz et des vapeurs inflammable

Bestimmung der Sauerstoffgrenzkonzentration (SGK) für
brennbare Gase und Dämpfe

This European Standard was approved by CEN on 2 October 2006.

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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 Central Secretariat has the same status as the official versions.

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Foreword

This document (EN 14756:2006) has been prepared by Technical Committee CEN/TC 305 "Potentially explosive atmospheres - Explosion prevention and protection", the secretariat of which is held by DIN.

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 May 2007, and conflicting national standards shall be withdrawn at the latest by May 2007.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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

Introduction

This European Standard describes a method for the experimental determination of the limiting oxygen concentration (LOC) of mixtures consisting of flammable gas or vapour, air and inert gas. The LOC is the maximum concentration of oxygen in a mixture at which an explosion cannot occur at any fuel concentration. Explosion protection by "inerting" is based on the LOC.

1 Scope

This European Standard specifies the method for determining the *LOC* of mixtures consisting of flammable gas or vapour, air and inert gas at atmospheric pressure and temperatures from ambient temperature to 200 °C.

2 Normative references

The following referenced documents are indispensable for the application 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.

EN 1839:2003, *Determination of explosion limits of gases and vapours*

3 Terms and definitions

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

3.1

limiting air concentration

LAC

maximum air concentration in a mixture of a flammable substance, air and an inert gas, in which an explosion will not occur, determined under specified test conditions

NOTE 1 *LAC* is usually expressed as molar fraction in % or volume fraction in % (for conversion of units see EN 1839:2003, Annex F).

NOTE 2 The *LAC* does not depend only on the flammable gas or vapour, but also on the inert gas used.

3.2

limiting oxygen concentration

LOC

maximum oxygen concentration in a mixture of a flammable substance, air and an inert gas, in which an explosion will not occur

NOTE 1 *LOC* is usually expressed as molar fraction in % or volume fraction in % (for conversion of units see EN 1839:2003, Annex F)

NOTE 2 The *LOC* does not depend only on the flammable gas or vapour, but also on the inert gas used.

3.3

test substance

substance or mixture of substances for which the *LOC* is to be determined

NOTE The test substance is usually a flammable gas or the vapour generated by the complete evaporation of a flammable liquid.

3.4

test mixture

mixture of test substance, air and inert gas