

## საქართველოს სტანდარტი

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English Version

**Determination of explosion characteristics of dust clouds - Part  
4: Determination of the limiting oxygen concentration LOC of  
dust clouds**

Détermination des caractéristiques d'explosion des nuages de poussière - Partie 4: Détermination de la concentration limite en oxygène CLO des nuages de poussière

Bestimmung der Explosionskenngrößen von Staub/Luft-Gemischen - Teil 4: Bestimmung der Sauerstoffgrenzkonzentration SGK von Staub/Luft-Gemischen

This European Standard was approved by CEN on 9 July 2004 and includes Amendment 1 approved by CEN on 13 November 2010.

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## Contents

|  | page      |
|--|-----------|
| <b>Foreword.....</b>   | <b>3</b>  |
| <b>1 Scope .....</b>   | <b>5</b>  |
| <b>2 Normative references .....</b>  | <b>5</b>  |
| <b>3 Terms and definitions .....</b>   | <b>5</b>  |
| <b>4 Test apparatus .....</b>  | <b>6</b>  |
| <b>4.1 General.....</b>  | <b>6</b>  |
| <b>4.2 Explosion vessel.....</b>   | <b>8</b>  |
| <b>4.3 Dust dispersion system (dust container, fast acting valve, connecting tube, dust disperser).....</b>                              | <b>8</b>  |
| <b>4.4 Ignition source .....</b>   | <b>12</b> |
| <b>4.5 Control unit.....</b>   | <b>12</b> |
| <b>4.6 Pressure measuring system.....</b>  | <b>12</b> |
| <b>4.7 Oxygen measuring system .....</b>   | <b>12</b> |
| <b>4.8 System to create the inert gas/air-mixture .....</b>  | <b>12</b> |
| <b>5 Dust sample.....</b>  | <b>12</b> |
| <b>6 Test procedure .....</b>  | <b>12</b> |
| <b>7 Calibration and verification .....</b>  | <b>15</b> |
| <b>7.1 Calibration .....</b>   | <b>15</b> |
| <b>7.2 Verification .....</b>  | <b>15</b> |
| <b>8 Safety precautions / instructions for use .....</b>   | <b>15</b> |
| <b>9 Alternative test equipment / procedures .....</b>   | <b>16</b> |
| <b>10 Test report .....</b>  | <b>16</b> |
| <b>Annex A (normative) Electro pneumatic valve .....</b>   | <b>17</b> |
| <b>Annex B (normative) Dust disperser with 5 mm holes .....</b>  | <b>20</b> |
| <b>Annex C (normative) 20 l sphere .....</b>   | <b>24</b> |
| <b>C.1 General.....</b>  | <b>24</b> |
| <b>C.2 Test apparatus .....</b>  | <b>24</b> |
| <b>C.3 Test conditions .....</b>   | <b>25</b> |
| <b>C.4 System to create the inert gas/air-mixture .....</b>  | <b>26</b> |
| <b>C.5 Test procedure .....</b>  | <b>26</b> |
| <b>Annex D (informative) Examples of procedures to determine the LOC.....</b>  | <b>27</b> |
| <b>Annex ZA (informative)  Relationship between this European Standard and the Essential Requirements of EU Directive 94/9/EC  .....</b> | <b>29</b> |
| <b>Bibliography .....</b>  | <b>30</b> |

## Foreword

This document (EN 14034-4:2004+A1:2011) 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 July 2011, and conflicting national standards shall be withdrawn at the latest by July 2011.

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

This document includes Amendment 1, approved by CEN on 2010-11-13.

This document supersedes EN 14034-4:2004.

The start and finish of text introduced or altered by amendment is indicated in the text by tags **A1** **A1**.

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.

This document includes a Bibliography.

This document is one of a series of standards as listed below:

- EN 14034-1, Determination of explosion characteristics of dust clouds - Part 1: Determination of the maximum explosion pressure  $p_{\max}$  of dust clouds;
- **A1** EN 14034-2 **A1**, Determination of explosion characteristics of dust clouds - Part 2: Determination of the maximum rate of explosion pressure rise  $(dp/dt)_{\max}$  of dust clouds;
- **A1** EN 14034-3 **A1**, Determination of explosion characteristics of dust clouds – Part 3: Determination of the lower explosion limit LEL of dust clouds;
- EN 14034-4, Determination of explosion characteristics of dust clouds – Part 4: Determination of the limiting oxygen concentration LOC of dust clouds.

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, 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 document specifies a method for experimental determination of the limiting oxygen concentration of dust/air/inert gas mixtures. The limiting oxygen concentration is the maximum concentration of oxygen of a dust/air/inert gas mixture at which dust explosions cannot occur. The measurement of the limiting oxygen concentration forms the basis for explosion protection by "Inerting".

This limiting oxygen concentration is a safety characteristic used for hazard identification and designing safety measures. This is done by avoidance or reduction of the amount of explosive atmosphere.

~~Ⓐ1) deleted text ⓒ1~~