

RATIFICACIÓN DE DOCUMENTOS EUROPEOS ABRIL 2015

HOJA DE ANUNCIO

En cumplimiento del punto 11.2.6.4 de las Reglas Internas de CEN/CENELEC Parte 2, se ha otorgado el rango de norma española al Documento Europeo siguiente:

Documento Europeo	Título	Fecha de Disponibilidad
EN 1127-2:2014	Atmósferas explosivas. Prevención y protección contra la explosión. Parte 2: Conceptos básicos y metodología para minería. (Ratificada por AENOR en abril de 2015.)	2014-06-18

Este anuncio causará efecto a partir del primer día del mes siguiente al de su publicación en la revista UNE. La correspondiente versión oficial de este documento se encuentra disponible en la sede de AENOR, Calle Génova 6, 28004 MADRID.

©.2014.. Derechos de reproducción reservados a los Miembros de .

EUROPEAN STANDARD

EN 1127-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2014

ICS 13.230; 73.100.01

Supersedes EN 1127-2:2002+A1:2008

English Version

Explosive atmospheres - Explosion prevention and protection - Part 2: Basic concepts and methodology for mining

Atmosphères explosives - Prévention de l'explosion et
protection contre l'explosion - Partie 2: Notions
fondamentales et méthodologie dans l'exploitation des
mines

Explosionsfähige Atmosphären - Explosionsschutz - Teil 2:
Grundlagen und Methodik in Bergwerken

This European Standard was approved by CEN on 7 May 2014.

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, 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

© 2014 CEN All rights of exploitation in any form and by any means reserved
worldwide for CEN national Members.

Ref. No. EN 1127-2:2014 E

This is a preview. [Click here to purchase the full publication.](#)

Contents	Page
Foreword.....	4
Introduction	5
1 Scope	8
2 Normative references	9
3 Terms and definitions	10
4 Risk assessment.....	11
4.1 General.....	11
4.2 Identification of explosion hazards.....	11
4.3 Identification of ignition hazards	11
4.4 Estimation of the possible effects of an explosion.....	11
5 Possible ignition sources	12
5.1 Hot surfaces	12
5.2 Flames and hot gases (including hot particles)	12
5.3 Mechanically generated sparks.....	12
5.4 Electrical equipment.....	12
5.5 Stray electric currents.....	12
5.6 Static electricity	13
5.7 Lightning.....	13
5.8 Radio frequency (RF) electromagnetic waves from 10^4 Hz to 3×10^{11} Hz (high frequency).....	13
5.9 Electromagnetic waves from 3×10^{11} Hz to 3×10^{15} Hz	13
5.10 Ionizing radiation	13
5.11 Ultrasonics	13
5.12 Adiabatic compression and shock waves	13
5.13 Exothermic reactions, including self-ignition of dusts.....	13
6 Risk reduction	14
6.1 Fundamental principles	14
6.2 Avoidance or reduction of explosive atmosphere	14
6.2.1 Process parameters	14
6.2.2 Design and construction of equipment, protective systems and components containing flammable substances	16
6.3 Classification of hazardous atmospheric conditions	16
6.3.1 General.....	16
6.3.2 Hazardous atmospheric conditions.....	17
6.4 Requirements for the design and construction of equipment, protective systems and components by avoidance of effective ignition sources.....	17
6.4.1 General.....	17
6.4.2 Hot surfaces	18
6.4.3 Flames and hot gases	19
6.4.4 Mechanically generated sparks.....	19
6.4.5 Electrical equipment.....	20
6.4.6 Stray electric currents.....	20
6.4.7 Static electricity	20
6.4.8 Lightning.....	20
6.4.9 Radio frequency (RF) electromagnetic waves from 10^4 Hz to 3×10^{11} Hz	20
6.4.10 Electromagnetic waves from 3×10^{11} Hz to 3×10^{15} Hz	21
6.4.11 Ionizing radiation	22

6.4.12	Ultrasonics	22
6.4.13	Adiabatic compression and shock waves	22
6.4.14	Exothermic reactions, including self-ignition of dusts	22
6.5	Requirements for design and construction of equipment, protective systems and components to reduce the explosion effects	23
6.5.1	General	23
6.5.2	Special equipment for underground mining.....	23
6.6	Provisions for emergency measures	24
6.7	Principles for measuring and control systems for explosion prevention and protection.....	24
7	Information for use	24
7.1	General	24
7.2	Information for commissioning, maintenance and repair to prevent explosion	25
7.3	Qualifications and training	26
Annex A	(informative) Relation between categories and hazardous atmospheric conditions.....	27
Annex B	(normative) Tools for use in potentially explosive atmospheres.....	28
Annex C	(informative) Significant technical changes between this document and the previous edition of this European Standard.....	29
Annex ZA	(informative) Relationship between this European Standard and the Essential Requirements of EU Directive 94/9/EC	30
Annex ZB	(informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	31
Bibliography	32