ICS 29.260.20 SLOVENSKÁ TECHNICKÁ NORMA September 2015

STN	**Výbušné atmosféry. Časť 32-2: Ohrozenie elektrostatickou energiou. Skúšky.**	**STN EN 60079-32-2** 33 2320

Explosive atmospheres - Part 32-2: Electrostatics hazards - Tests

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. 08/15

Obsahuje: EN 60079-32-2:2015, IEC 60079-32-2:2015

121280

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60079-32-2

April 2015

ICS 29.260.20

English Version

Explosive atmospheres - Part 32-2: Electrostatics hazards - Tests (IEC 60079-32-2:2015)

Atmosphères explosives - Partie 32-2: Dangers électrostatiques - Essais (IEC 60079-32-2:2015)

Explosionsgefährdete Bereiche - Teil 32-2: Elektrostatische Gefährdungen - Prüfverfahren (IEC 60079-32-2:2015)

This European Standard was approved by CENELEC on 2015-04-01. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

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

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

Ref. No. EN 60079-32-2:2015 E

Foreword

The text of document 31/1164/FDIS, future edition 1 of IEC 60079-32-2, prepared by IEC/TC 31 "Equipment for explosive atmospheres" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60079-32-2:2015.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2016-01-01
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-04-01

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

Endorsement notice

The text of the International Standard IEC 60079-32-2:2015 was approved by CENELEC as a European Standard without any modification.

IEC 60079-1	NOTE	Harmonized as EN 60079-1.
IEC 60079-7	NOTE	Harmonized as EN 60079-7.
IEC 60079-10-1	NOTE	Harmonized as EN 60079-10-1.
IEC 60079-10-2	NOTE	Harmonized as EN 60079-10-2.
IEC 60167	NOTE	Harmonized as HD 568 S1.
IEC 61340-4-1	NOTE	Harmonized as EN 61340-4-1.
IEC 61340-4-3	NOTE	Harmonized as EN 61340-4-3.
IEC 61340-4-5	NOTE	Harmonized as EN 61340-4-5.
ISO 284	NOTE	Harmonized as EN ISO 284.
ISO 8031	NOTE	Harmonized as EN ISO 8031.
ISO 8330	NOTE	Harmonized as EN ISO 8330.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 60079-0	-	Explosive atmospheres -- Part 0: Equipment - General requirements	EN 60079-0	-
-	-		+A11	-
IEC 60093	-	Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials	HD 429 S1	-
IEC 60243-1	-	Electric strength of insulating materials - Test methods -- Part 1: Tests at power frequencies	EN 60243-1	-
IEC 60243-2	-	Electric strength of insulating materials - Test methods -- Part 2: Additional requirements for tests using direct voltage	EN 60243-2	-
IEC 60247	-	Insulating liquids - Measurement of relative permittivity, dielectric dissipation factor (tan d) and d.c. resistivity	EN 60247	-
IEC 61340-2-1	-	Electrostatics -- Part 2-1: Measurement methods - Ability of materials and products to dissipate static electric charge	EN 61340-2-1	-
IEC 61340-2-3	-	Electrostatics -- Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation	EN 61340-2-3	-
IEC 61340-4-4	-	Electrostatics - Part 4-4: Standard test methods for specific applications - Electrostatic classification of flexible intermediate bulk containers (FIBC)	EN 61340-4-4	-
ISO 14309	-	Rubber, vulcanized or thermoplastic - Determination of volume and/or surface resistivity	-	-
IEC/TS 60079-32-1	-	Explosive atmospheres - Part 32-1: Electrostatic hazards, guidance	CLC/TR 60079-32-1	-
IEC/TS 61241-2-2	-	Electrical apparatus for use in the presence of combustible dust -- Part 2: Test methods -- Section 2: Method for determining the electrical resistivity of dust in layers	EN 61241-2-2	-
ASTM E582	-	Standard test method for minimum ignition energy and quenching distance in gaseous mixtures	-	-
EN 1081	-	Resilient floor coverings - Determination of the electrical resistance	-	-
EN 1149-3	-	Protective clothing - Electrostatic properties - Part 3: Test methods for measurement of charge decay	-	-

IEC 60079-32-2

Edition 1.0 2015-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Explosive atmospheres – Part 32-2: Electrostatics hazards – Tests

Atmosphères explosives – Partie 32-2: Dangers électrostatiques – Essais

IEC 60079-32-2:2015-02(en-fr)

IEC 60079-32-2

Edition 1.0 2015-02

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Explosive atmospheres – Part 32-2: Electrostatics hazards – Tests

Atmosphères explosives – Partie 32-2: Dangers électrostatiques – Essais

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

ICS 29.260.20

ISBN 978-2-8322-2276-8

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

EXPLOSIVE ATMOSPHERES –

Part 32-2: Electrostatics hazards – Tests

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60079-32-2 has been prepared by IEC technical committee 31: Equipment for explosive atmospheres.

The text of this standard is based on the following documents:

FDIS	Report on voting
31/1164/FDIS	31/1176/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 60079 series, under the general title *Explosive atmospheres*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

EXPLOSIVE ATMOSPHERES –

Part 32-2: Electrostatics hazards – Tests

1 Scope

This part of IEC 60079 describes test methods concerning the equipment, product and process properties necessary to avoid ignition and electrostatic shock hazards arising from static electricity. It is intended for use in a risk assessment of electrostatic hazards or for the preparation of product family or dedicated product standards for electrical or non-electrical machines or equipment.

The purpose of this part of IEC 60079 is to provide standard test methods used for the control of static electricity, such as surface resistance, earth leakage resistance, powder resistivity, liquid conductivity, capacitance and evaluation of the incendivity of provoked discharges. It is especially intended for use with existing standards of the IEC 60079 series.

NOTE IEC TS 60079-32-1, *Explosive atmospheres – Part 32-1: Electrostatic hazards, guidance*, was published in 2013. This international standard is not intended to supersede standards that cover specific products and industrial situations.

This part of IEC 60079 presents the latest state of knowledge which may, however, slightly differ from requirements in other standards, especially concerning test climates. When a requirement of this standard conflicts with a requirement specified in IEC 60079-0, to avoid the possibility of re-testing previously approved equipment, the requirement in IEC 60079-0 applies only for equipment within the scope of IEC 60079-0. In all other cases, the statements in this part of IEC 60079 apply.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60079-0, *Explosive atmospheres – Part 0: Equipment – General requirements*

IEC TS 60079-32-1, *Explosive atmospheres – Part 32-1: Electrostatic hazards, guidance*

IEC 60093, *Methods of test for volume resistivity and surface resistivity of solid electrical insulating materials*

IEC 60243-1, *Electric strength of insulating materials – Test methods – Part 1: Tests at power frequencies*

IEC 60243-2, *Electric strength of insulating materials – Test methods – Part 2: Additional requirements for tests using direct voltage*

IEC 60247, *Insulating liquids – Measurement of relative permittivity, dielectric dissipation factor (tan d) and d.c. resistivity*

IEC TS 61241-2-2, *Electrical apparatus for use in the presence of combustible dust – Part 2: Test methods – Section 2: Method for determining the electrical resistivity of dust in layers*

IEC 61340-2-1, *Electrostatics – Part 2-1: Measurement methods – Ability of materials and products to dissipate static electric charge*

IEC 61340-2-3, *Electrostatics – Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation*

IEC 61340-4-4, *Electrostatics – Part 4-4: Standard test methods for specific applications – Electrostatic classification of flexible intermediate bulk containers (FIBC)*

ISO 14309, *Rubber, vulcanized or thermoplastic – Determination of volume and/or surface resistivity*

ASTM E582, *Standard test method for minimum ignition energy and quenching distance in gaseous mixtures*

EN 1081, *Resilient floor coverings – Determination of the electrical resistance*

EN 1149-3, *Protective clothing – Electrostatic properties Part 3: Test methods for measurement of charge decay.*