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Live working - Protective clothing against the thermal hazards of an electric arc - Part 1-1: Test methods - Method 1: Determination of the arc rating (ELIM, ATPV and/or EBT) of clothing materials and of protective clothing using an open arc

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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See Eesti standard EVS-EN IEC 61482-1-1:2019 sisaldab Euroopa standardi EN IEC 61482-1-1:2019 ingliskeelset teksti.	This Estonian standard EVS-EN IEC 61482-1-1:2019 consists of the English text of the European standard EN IEC 61482-1-1:2019.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.08.2019.	Date of Availability of the European standard is 30.08.2019.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

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ICS 13.220.40, 29.260

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 61482-1-1

August 2019

ICS 13.220.40; 29.260

Supersedes EN 61482-1-1:2009 and all of its amendments and corrigenda (if any)

English Version

Live working - Protective clothing against the thermal hazards of an electric arc - Part 1-1: Test methods - Method 1: Determination of the arc rating (ELIM, ATPV and/or EBT) of clothing materials and of protective clothing using an open arc (IEC 61482-1-1:2019)

Travaux sous tension - Vêtements de protection contre les dangers thermiques d'un arc électrique - Partie 1-1: Méthodes d'essai - Méthode 1: Détermination de la valeur assignée d'arc (ELIM, ATPV et/ou EBT) des matériaux pour vêtements et des vêtements de protection utilisant un arc ouvert
(IEC 61482-1-1:2019)

Arbeiten unter Spannung - Schutzkleidung gegen thermische Gefahren eines Lichtbogens - Teil 1-1: Prüfverfahren - Verfahren 1: Bestimmung der Lichtbogen-Kennwerte (ELIM, ATPV und/oder EBT) von Bekleidungsstoffen und Schutzkleidung mithilfe eines offenen Lichtbogens
(IEC 61482-1-1:2019)

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

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European foreword

The text of document 78/1256/FDIS, future edition 2 of IEC 61482-1-1, prepared by IEC/TC 78 "Live working" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 61482-1-1:2019.

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) 2020-05-07
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-08-07

This document supersedes EN 61482-1-1:2009 and all of its amendments and corrigenda (if any).

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

Endorsement notice

The text of the International Standard IEC 61482-1-1:2019 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60060-1	NOTE	Harmonized as EN 60060-1
IEC 61482-1-2:2014	NOTE	Harmonized as EN 61482-1-2:2014 (not modified)
ISO 3175-2	NOTE	Harmonized as EN ISO 3175-2
ISO 6330	NOTE	Harmonized as EN ISO 6330
ISO 9151	NOTE	Harmonized as EN ISO 9151
ISO 13688	NOTE	Harmonized as EN ISO 13688
ISO 15797	NOTE	Harmonized as EN ISO 15797

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Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where 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 60584-1	-	Thermocouples - Part 1: EMF specifications and tolerances	EN 60584-1	-
IEC 61482-2	2018	Live working – Protective clothing against the thermal hazards of an electric arc – Part 2: Requirements	-	-
ISO/IEC 17025	2017	General requirements for the competence of testing and calibration laboratories	EN ISO/IEC 17025	2017
ISO/TR 11610	-	Protective clothing - Vocabulary	CEN ISO/TR 11610	-
ISO 11612	2015	Protective clothing – Clothing to protect against heat and flame – Minimum performance requirements	EN ISO 11612	2015

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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LIVE WORKING – PROTECTIVE CLOTHING AGAINST THE THERMAL HAZARDS OF AN ELECTRIC ARC –

Part 1-1: Test methods – Method 1: Determination of the arc rating (ELIM, ATPV and/or EBT) of clothing materials and of protective clothing using an open arc

FOREWORD

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International Standard IEC 61482-1-1 has been prepared by IEC technical committee 78: Live working.

This second edition cancels and replaces the first edition published in 2009. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

– addition of the *Incident energy limit* ($ELIM$) as a further *arc rating* performance property value;
– replacement of char length requirement in the scope by indication that Procedure A is applicable for testing of *material*s meeting the limited flame spread requirements of IEC 61482-2;

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– clarification of the definition and the meaning of the *Stoll curve*;
– modification of specification of positioning of *monitor sensor*s with respect to the *electric arc* as function of intended high *incident energy* exposure of test specimens;
– modification of specifications of *monitor sensor* construction;
– specification of black paint;
– elimination of *calorimeter*s from the chest of the mannequin;
– specification for possible positioning of mannequin(s) at a height different from the centre of the *electric arc* and possible turning in order to adequately expose all parts of the *garment* or clothing which would affect performance;
– more explicit description of requirements for data acquisition system;
– preconditioning of the samples;
– modification of requirements for apparatus and arc exposure verification by *bare shot*s;
– more explicit description of test procedures A and B, in particular the subclauses dealing with “sequence of test”, “test parameter” and “test criteria”;
– addition of determination of *arc rating* values of *garment*s and/or *garment* assemblies.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
78/1256/FDIS	78/1262/RVD

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

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

In this standard terms defined in Clause 3 appear in *italics.*

A list of all parts in the IEC 61482 series, published under the general title *Live working – Protective clothing against the thermal hazards of an electric arc*, can be found on the IEC website.

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

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

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