Irish Standard
I.S. EN 61482-1-1:2009

Live working - Protective clothing against the thermal hazards of an electric arc -- Part 1-1: Test methods - Method 1: Determination of the arc rating (ATPV or EBT50) of flame resistant materials for clothing (IEC 61482-1-1:2009 (EQV))

I.S. EN 61482-1-1:2009

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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 (ATPV or E_{BT50}) of flame resistant materials for clothing

(IEC 61482-1-1:2009)

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 caractéristique d'arc (ATPV ou E_{BT50}) de matériaux résistant à la flamme pour vêtements (CEI 61482-1-1:2009)

Arbeiten unter Spannung - Schutzkleidung gegen thermische Gefahren eines Lichtbogens - Teil 1-1: Prüfverfahren - Verfahren 1: Bestimmung der Lichtbogenkennwerte (ATPV oder E_{BT50}) von schwer entflammbaren Bekleidungsstoffen (IEC 61482-1-1:2009)

This European Standard was approved by CENELEC on 2009-06-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

CENELEC

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

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Foreword

The text of document 78/793/FDIS, future edition 1 of IEC 61482-1-1, prepared by IEC TC 78, Live working, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61482-1-1 on 2009-06-01.

This European Standard supersedes CLC/TS 61482-1:2003.

EN 61482-1-1:2009 includes the following significant technical change with respect to CLC/TS 61482-1:2003:

– addition of a detailed analysis of the sensor response.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2010-03-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2012-06-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61482-1-1:2009 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 61482-1-2	NOTE	Harmonized as EN 61482-1-2:2007 (not modified).
ISO 5077	NOTE	Harmonized as EN ISO 5077:2008 (not modified).

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

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.

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

Publication	Year	Title	EN/HD	Year
ISO 3175-2	-[1)]	Textiles - Professional care, drycleaning and wetcleaning of fabrics and garments - Part 2: Procedure for testing performance when cleaning and finishing using tetrachloroethene	EN ISO 3175-2	1998[2)]
ISO 6330	-[1)]	Textiles - Domestic washing and drying procedures for textile testing	EN ISO 6330	2000[2)]
ISO 9151	-[1)]	Protective clothing against heat and flame - Determination of heat transmission on exposure to flame	-	-
ISO 15025	2000	Protective clothing - Protection against heat and flame - Method of test for limited flame spread	EN ISO 15025	2002

[1)] Undated reference.

[2)] Valid edition at date of issue.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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FOREWORD

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

This standard cancels and replaces IEC 61482-1:2002. It constitutes a technical revision.

This edition includes the following significant technical changes with respect to IEC 61482-1:

– addition of a detailed analysis of the sensor response.

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

FDIS	Report on voting
78/793/FDIS	78/805/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 61482 series can be found, under the general title *Live working – Protective clothing against the thermal hazards of an electric arc*, on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the maintenance result 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.

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

Part 1-1: Test methods – Method 1: Determination of the arc rating (ATPV or E_{BT50}) of flame resistant materials for clothing

1 Scope

This part of IEC 61482 specifies test methods to measure the arc thermal performance value of materials intended for use in heat- and flame-resistant clothing for workers exposed to the thermal effects of electric arcs and the function of garments using these materials. These test methods measure the arc thermal performance value of materials which meet the following requirements: less than 100 mm char length and less than 2 s afterflame after removal from flame, when tested in accordance with ISO 15025, procedure B (bottom-edge ignition) on the outer material, and the char length measured using a modified ISO method as described in Annex A.

These methods are used to measure and describe the properties of materials, products, assemblies or garments, in response to convective and radiant energy generated by an electric arc in open air under controlled laboratory conditions.

The materials used in these methods are in the form of flat specimens for method A and garments for method B.

Method A is used to determine the arc rating of materials and material assemblies when tested in a flat configuration.

Method B is used to measure garment response, not arc rating, to an arc exposure including all the garment findings, sewing thread, fastenings, fabrics and other accessories when tested on a male mannequin torso. Method B is also used for accident replication.

It is the responsibility of the user of this part of IEC 61482 to establish appropriate safety and health practices prior to use. For specific precautions, see Clause 7.

The test methods in this part of IEC 61482 are not directed to classify by protection classes. Methods determining protection classes are prescribed in IEC 61482-1-2.

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.

ISO 3175-2, *Textiles – Professional care, drycleaning and wetcleaning of fabrics and garments – Part 2: Procedure for testing performance when cleaning and finishing using tetrachloroethene*

ISO 6330, *Textiles – Domestic washing and drying procedures for textile testing*