



NSAI
Standards

Irish Standard
I.S. EN 60674-2:2017

Specification for plastic films for electrical purposes - Part 2: Methods of test

I.S. EN 60674-2:2017

Incorporating amendments/corrigenda/National Annexes issued since publication:

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NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

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National Foreword

I.S. EN 60674-2:2017 is the adopted Irish version of the European Document EN 60674-2:2017, Specification for plastic films for electrical purposes - Part 2: Methods of test

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EUROPEAN STANDARD

EN 60674-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2017

ICS 17.220.99; 29.035.20

Supersedes EN 60674-2:1998

English Version

**Specification for plastic films for electrical purposes -
Part 2: Methods of test
(IEC 60674-2:2016)**

Spécification pour les films en matière plastique à usages
électriques - Partie 2: Méthodes d'essai
(IEC 60674-2:2016)

Bestimmung für Isolierfolien für elektrotechnische Zwecke -
Teil 2: Prüfverfahren
(IEC 60674-2:2016)

This European Standard was approved by CENELEC on 2016-12-23. 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.

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Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

EN 60674-2:2017

European foreword

The text of document 15/742/CDV, future edition 2 of IEC 60674-2, prepared by IEC/TC 15 "Solid electrical insulating materials" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60674-2:2017.

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) 2017-09-23
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-12-23

This document supersedes EN 60674-2:1998.

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 60674-2:2016 was approved by CENELEC as a European Standard without any modification.

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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60212	2010	Standard conditions for use prior to and during the testing of solid electrical insulating materials	EN 60212	2011
IEC 60216	series	Electrical insulating materials - Thermal endurance properties	EN 60216	series
IEC 60243-1	2013	Electric strength of insulating materials - Test methods - Part 1: Tests at power frequencies	EN 60243-1	2013
IEC 60243-2	-	Electric strength of insulating materials - Test methods - Part 2: Additional requirements for tests using direct voltage	EN 60243-2	-
IEC 60250	1969	Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths	-	-
IEC 60343	-	Recommended test methods for determining the relative resistance of insulating materials to breakdown by surface discharges	EN 60343	-
IEC 60394-2	1972	Varnished fabrics for electrical purposes - Part 2: Methods of test	-	-
IEC 60426	-	Electrical insulating materials - Determination of electrolytic corrosion caused by insulating materials - Test methods	EN 60426	-
IEC 60454-2	2007	Pressure-sensitive adhesive tapes for electrical purposes - Part 2: Methods of test	EN 60454-2	2007

EN 60674-2:2017

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60589	-	Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids	HD 381 S1	-
IEC/TR 60648	-	Method of test for coefficients of friction of plastic film and sheeting for use as electrical insulation	-	-
IEC 60674-3	series	Specification for plastic films for electrical purposes - Part 3: Specifications for individual materials	EN 60674-3	series
IEC 62631-3-1	-	Dielectric and resistive properties of solid insulating materials - Part 3-1 Determination of resistive properties (DC methods) - Volume resistance and volume resistivity, general method	EN 62631-3-1	-
IEC 62631-3-2	-	Dielectric and resistive properties of solid insulating materials - Part 3-2 Determination of resistive properties (DC methods) - Surface resistance and surface resistivity	EN 62631-3-2	-
ISO 527-3	1995	Plastics - Determination of tensile properties - Part 3: Test conditions for films and sheets	EN ISO 527-3	1995
ISO 534	-	Paper and board - Determination of thickness, density and specific volume	EN ISO 534	-
ISO 1183-1	-	Plastics - Methods for determining the density of non-cellular plastics - Part 1: Immersion method, liquid pycnometer method and titration method	EN ISO 1183-1	-
ISO 4591	1992	Plastics - Film and sheeting - Determination of average thickness of a sample, and average thickness and yield of a roll, by gravimetric techniques (gravimetric thickness)	-	-
ISO 4592	-	Plastics - Film and sheeting - Determination of length and width	-	-
ISO 4593	-	Plastics - Film and sheeting - Determination of thickness by mechanical scanning	-	-
ISO 6383-1	-	Plastics - Film and sheeting - Determination of tear resistance - Part 1: Trouser tear method	EN ISO 6383-1	-
ISO 6383-2	-	Plastics - Film and sheeting - Determination of tear resistance - Part 2: Elmendorf method	EN ISO 6383-2	-
ISO 11357-3	2011	Plastics - Differential scanning calorimetry (DSC) - Part 3: Determination of temperature and enthalpy of melting and crystallization	EN ISO 11357-3	2013



IEC 60674-2

Edition 2.0 2016-11

INTERNATIONAL STANDARD

**Specification for plastic films for electrical purposes –
Part 2: Methods of test**





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IEC Central Office
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
Fax: +41 22 919 03 00
info@iec.ch
www.iec.ch

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IEC 60674-2

Edition 2.0 2016-11

INTERNATIONAL STANDARD

**Specification for plastic films for electrical purposes –
Part 2: Methods of test**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATION FOR PLASTIC FILMS FOR ELECTRICAL PURPOSES –

Part 2: Methods of test

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.
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International Standard IEC 60674-2 has been prepared by IEC technical committee 15: Solid electrical insulating materials.

This second edition cancels and replaces the first edition published in 1988 and Amendment 1 (2001). This edition constitutes a technical revision.

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

- a) this document was completely revised editorially and technically and included in the IEC 60674 series of standards;
- b) the test methods are updated to reflect today's state of the art;
- c) a method to obtain DC electric strength is now specified according to IEC 60243-2.

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

CDV	Report on voting
15/742/CDV	15/760/RVC

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.

A list of all parts in the IEC 60674 series, published under the general title *Specification for plastic films for electrical purposes*, 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.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

This document is one of a series which deals with plastic films for electrical purposes. The series consists of three parts:

Part 1: Definitions and general requirements (IEC 60674-1)

Part 2: Methods of test (IEC 60674-2)

Part 3: Specifications for individual materials (IEC 60674-3 (all parts))

SPECIFICATION FOR PLASTIC FILMS FOR ELECTRICAL PURPOSES –

Part 2: Methods of test

1 Scope

This part of IEC 60674 is applicable to plastic films used for electrical purposes. This part of IEC 60674 gives methods of test.

2 Normative references

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.

IEC 60212:2010, *Standard conditions for use prior to and during the testing of solid electrical insulating materials*

IEC 60216 (all parts), *Electrical insulating materials – Thermal endurance properties*

IEC 60243-1:2013, *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 60250:1969, *Recommended methods for the determination of the permittivity and dielectric dissipation factor of electrical insulating materials at power, audio and radio frequencies including metre wavelengths*

IEC 60343, *Recommended test methods for determining the relative resistance of insulating materials to breakdown by surface discharges*

IEC 60394-2:1972, *Varnished fabrics for electrical purposes – Part 2: Methods of test*

IEC 60426, *Electrical insulating materials – Determination of electrolytic corrosion caused by insulating materials – Test methods*

IEC 60454-2:2007, *Pressure-sensitive adhesive tapes for electrical purposes – Part 2: Methods of test*

IEC 60589, *Methods of test for the determination of ionic impurities in electrical insulating materials by extraction with liquids*

IEC TR 60648, *Method of test for coefficients of friction of plastic film and sheeting for use as electrical insulation*

IEC 60674-3 (all parts), *Specification for plastic films for electrical purposes – Part 3: Specifications for individual materials*

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