



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

ICS 17.220.99; 29.035.20

ISBN 978-2-8322-3747-2

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CONTENTS

FOREWORD.....	6
INTRODUCTION.....	8
1 Scope.....	9
2 Normative references	9
3 General notes on tests	10
4 Thickness.....	10
4.1 General.....	10
4.2 Determination of thickness by mechanical scanning.....	10
4.2.1 General	10
4.2.2 Measurement by a single sheet	11
4.3 Determination of thickness by gravimetric method.....	11
4.3.1 Measurement by a sample	11
4.3.2 Measurement by a roll	11
4.4 Crosswise thickness profile and lengthwise variation in thickness	11
5 Density.....	12
6 Width.....	12
7 Windability (bias/camber and sag)	12
7.1 Principle	12
7.2 General.....	12
7.3 Method A	12
7.3.1 Principle	12
7.3.2 Measurement of bias/camber.....	12
7.3.3 Measurement of sag	13
7.4 Method B	14
7.4.1 Principle	14
7.4.2 Apparatus.....	14
7.4.3 Test specimens	15
7.4.4 Procedure.....	15
7.4.5 Result.....	15
8 Surface roughness	15
9 Space factor.....	15
10 Coefficient of friction.....	16
11 Wetting tension (polyolefine films)	16
11.1 Test principle and introductory remarks.....	16
11.2 Apparatus	16
11.3 Reagents	16
11.4 Test specimens.....	17
11.5 Conditioning.....	17
11.6 Procedure	17
11.7 Evaluation.....	18
11.8 Report.....	18
12 Tensile properties.....	18
12.1 General.....	18
12.2 Test specimens.....	18
12.3 Speed of testing.....	18

12.4	Result	18
13	Edge tearing resistance	19
13.1	General.....	19
13.2	Principle	19
14	Tear resistance.....	19
15	Stiffness of film.....	19
16	Surface resistivity	19
17	Volume resistivity	19
17.1	Method 1: Electrode method	19
17.2	Method 2: Method for wound capacitor dielectric films or films too thin for Method 1.....	19
17.2.1	Principle	19
17.2.2	Test specimens	20
17.2.3	Procedure.....	20
17.2.4	Result.....	20
18	Dissipation factor and permittivity	20
18.1	General.....	20
18.2	Method 1.....	20
18.2.1	General	20
18.2.2	Sample and specimen handling	21
18.2.3	Sample conditioning prior to measurement	21
18.2.4	Measurements with contacting electrodes.....	21
18.2.5	Measurements with non-contacting electrodes.....	23
18.2.6	Test procedure	23
18.2.7	Report	23
18.3	Method 2.....	23
18.3.1	General	23
18.3.2	Dissipation factor at or above 5×10^{-4}	24
18.3.3	Dissipation factor below 5×10^{-4}	24
19	Dissipation factor under impregnated conditions	24
20	Electric strength	24
20.1	AC and DC tests of film sheet sandwiched by metal electrodes.....	24
20.2	DC test using a wound capacitor.....	24
21	Electrical weak spots	24
21.1	General.....	24
21.2	Method A: Testing narrow strips of film in long lengths.....	25
21.2.1	Test equipment.....	25
21.2.2	Procedure.....	25
21.2.3	Results	25
21.3	Method B: Testing wide strips of film.....	25
21.3.1	General	25
21.3.2	Test equipment.....	25
21.3.3	Procedure.....	26
21.3.4	Results	26
21.4	Method C: Testing of film in rolls.....	26
21.4.1	General	26
21.4.2	Unreeling system.....	26
21.4.3	Fault counter	27

21.4.4	Procedure.....	27
21.4.5	Results	27
22	Resistance to breakdown by surface discharges.....	28
23	Electrolytic corrosion	28
24	Melting point.....	28
25	Dimensional change	28
25.1	Test specimens.....	28
25.2	Procedure	28
25.3	Results	28
26	Dimensional stability under tension with rising temperature	29
26.1	Test specimens.....	29
26.2	Procedure	29
26.3	Results	29
27	Dimensional stability under pressure with rising temperature	29
27.1	Test equipment	29
27.2	Test specimens.....	29
27.3	Procedure	29
27.4	Results	30
28	Resistance to penetration at elevated temperature	30
28.1	General.....	30
28.2	Principle	30
29	Volatile content (loss of mass on heating).....	30
29.1	Test specimens.....	30
29.2	Procedure	30
29.3	Result	30
30	Thermal endurance.....	30
31	Burning characteristics	31
31.1	Principle	31
31.2	Apparatus	31
31.3	Test specimens.....	31
31.4	Conditioning.....	31
31.5	Procedure	32
31.6	Interpretation of results	32
32	Water absorption in a damp atmosphere.....	33
32.1	Apparatus	33
32.2	Test specimens.....	33
32.3	Procedure	33
32.3.1	Water absorption of material as-received.....	33
32.3.2	Water absorption of dry material.....	33
32.4	Results	34
33	Absorption of liquid.....	34
33.1	Principle	34
33.2	Apparatus	34
33.3	Test specimens.....	34
33.4	Procedure	34
33.5	Calculations	35
33.6	Result	35

34	Ionic impurities	35
35	Effect of insulating varnishes	35
35.1	Procedure	35
35.2	Results	35
36	Effect of polymerisable resinous compounds in a liquid state.....	36
36.1	Procedure	36
36.2	Results	36
Figure 1	– Windability of film – Measurement of bias/camber – Method A	36
Figure 2	– Windability of film – Apparatus for measurement of sag – Method A.....	37
Figure 3	– Windability of film – Measurement of sag – Method A.....	37
Figure 4	– Three-terminal electrode system for low frequencies (up to 50 kHz).....	38
Figure 5	– Two-electrode system for high frequencies (above 50 kHz).....	38
Figure 6	– Equipment for testing for electrical weak spots by Method A	39
Figure 7	– Equipment for testing for electrical weak spots by Method B	40
Figure 8	– Equipment for testing for electrical weak spots by Method C1	40
Figure 9	– Equipment for testing for electrical weak spots by Method C2	41
10a)	Full view on arrangements of rolls, rollers and HV electrode	41
10b)	Schematic diagram with arrangement around the air gap	41
	between HV electrode and earthed roller	41
Figure 10	– Equipment for testing for electrical weak spots by Method C3	41
Table 1	– Concentrations of ethylene-glycol-monoethyl-ether, formamide mixtures used in measuring wetting tension of polyethylene and polypropylene films	17
Table 2	– Classification of materials regarding self-extinguishing properties	33

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SPECIFICATION FOR PLASTIC FILMS FOR ELECTRICAL PURPOSES –

Part 2: Methods of test

FOREWORD

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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*

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*

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*

ISO 527-3:1995, *Plastics – Determination of tensile properties – Part 3: Test conditions for films and sheets*

ISO 534, *Paper and board – Determination of thickness, density and specific volume*

ISO 1183, *Plastics – Methods for determining the density of non-cellular plastics – Part 1: Immersion method, liquid pycnometer method and titration method*

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*

ISO 6383-2, *Plastics – Film and sheeting – Determination of tear resistance – Part 2: Elmendorf method*

ISO 11357-3:2011, *Plastics – Differential scanning calorimetry (DSC) – Part 3: Determination of temperature and enthalpy of melting and crystallization*