

SLOVENSKI STANDARD
SIST EN 60674-3-1:2001/A1:2012
01-januar-2012

Plastične folije za električne namene - 3. del: Specifikacije za posamezne materiale
- 1. list: Dvoosno orientirana polipropilenska folija za kondenzatorje

Plastic films for electrical purposes - Part 3: Specifications for individual materials - Sheet 1: Biaxially oriented polypropylene (PP) film for capacitors

Isolierfolien für elektrotechnische Zwecke - Teil 3: Anforderungen für einzelne Werkstoffe - Blatt 1: Biaxial orientierte Polypropylen (PP) Folien für Kondensatoren

Films plastiques à usages électriques - Partie 3: Spécifications pour matériaux particuliers - Feuille 1: Films de polypropylène biorienté (PP) pour condensateurs

<https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012>

Ta slovenski standard je istoveten z: EN 60674-3-1:1998/A1:2011

ICS:

29.035.20 Plastični in gumeni izolacijski materiali Plastics and rubber insulating materials

SIST EN 60674-3-1:2001/A1:2012 en

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60674-3-1:2001/A1:2012

<https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012>

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 60674-3-1/A1

October 2011

ICS 29.035.20

English version

**Plastic films for electrical purposes -
Part 3: Specifications for individual materials -
Sheet 1: Biaxially oriented polypropylene (PP) film for capacitors
(IEC 60674-3-1:1998/A1:2011)**

Films plastiques à usages électriques -
Partie 3: Spécifications pour matériaux
particuliers -
Feuille 1: Films de polypropylène biorienté
(PP) pour condensateurs
(CEI 60674-3-1:1998/A1:2011)

Isolierfolien für elektrotechnische Zwecke -
Teil 3: Anforderungen für einzelne
Werkstoffe -
Blatt 1: Biaxial orientierte Polypropylen-
(PP)-Folien für Kondensatoren
(IEC 60674-3-1:1998/A1:2011)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

This amendment A1 modifies the European Standard EN 60674-3-1:1998; it was approved by CENELEC on 2011-10-18. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 15/596/CDV, future edition 1 of IEC 60674-3-1:1998/A1, prepared by IEC/TC 15, "Solid electrical insulating materials", was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60674-3-1:1998/A1:2011.

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) 2012-07-18
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2014-10-18

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 60674-3-1:1998/A1:2011 was approved by CENELEC as a European Standard without any modification.

(standards.iteh.ai)

[SIST EN 60674-3-1:2001/A1:2012](https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012)

<https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012>

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.

Add the following reference:

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
ISO 11357-3	-	Plastics - Differential scanning calorimetry (DSC) - Part 3: Determination of temperature and enthalpy of melting and crystallization	-	-

iTeh STANDARD PREVIEW (standards.iteh.ai)

[SIST EN 60674-3-1:2001/A1:2012](https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012)

<https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60674-3-1:2001/A1:2012

<https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012>



IEC 60674-3-1

Edition 1.0 2011-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

**Plastic films for electrical purposes –
Part 3: Specifications for individual materials – Sheet 1: Biaxially oriented
polypropylene (PP) films for capacitors**

**Films plastiques à usages électriques –
Partie 3: Spécifications pour matériaux particuliers – Feuille 1: Films de
polypropylène biorienté (PP) pour condensateurs**

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

PRICE CODE
CODE PRIX

D

ICS 29.035.20

ISBN 978-2-88912-685-9

FOREWORD

This amendment has been prepared by IEC technical committee 15: Solid electrical insulating materials.

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

CDV	Report on voting
15/596/CDV	15/609/RVC

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

The committee has decided that the contents of this amendment and the base 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.

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 60674-3-1:2001/A1:2012

<https://standards.iteh.ai/catalog/standards/sist/041f2360-9798-4638-be8c-cc6c2e58ee97/sist-en-60674-3-1-2001-a1-2012>

1.1 Scope

Add the following two paragraphs:

Materials which conform to this specification meet established levels of performance. However, the selection of a material by a user for a specific application should be based on the actual requirements necessary for adequate performance in that application and not based on this specification alone.

Safety warning: It is the responsibility of the user of the methods contained or referred to in this document to ensure that they are used in a safe manner.

1.2 Normative references

Add the following reference:

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

1.3 Classification

Add the following new type 3:

Type 3: having high electric strength for thin film (film thickness $\leq 3,5 \mu\text{m}$);

Type 3a: not corona treated;

Type 3b: one side pre-treated to facilitate the vacuum deposition of metal;

Type 3c: both sides pre-treated.

4.1 Thickness

Add the preferred gravimetric thicknesses for Type 3 materials as follows:

Type 3: 2,5; 2,8; 3,0 and 3,5 μm .

Table 1 – Physical properties

Add "ISO 11357-3" to the Test method for Melting point.

Add "Type 3:30" to the Requirement for Elongation at break.

Table 2 – Electric strength (d.c. test) for types 1, 2

Replace the existing Table 2 by the following new Table 2:

Table 2 – Electric strength (d.c. test) for types 1, 2 and 3

Nominal film thickness μm	Type	Electric strength (central value) $\text{V}/\mu\text{m}$		Not more than 1 of 21 results shall be below $\text{V}/\mu\text{m}$	
		23 °C	105 °C	23 °C	105 °C
		2,5	3	250	125
2,8	250	125		150	75
3,0	250	125		150	75
3,5	250	125		150	75
4	1 and 2	120	-	40	-
5		150	-	60	-
6		190	-	80	-
7 and 7,4		230	-	100	-
8		250	-	120	-
9		270	-	145	-
10 and 10,1		290	-	165	-
11		300	-	175	-
12		310	-	185	-
12,7		315	-	195	-
>12,7 to 25		320	-	200	-

5.3 Electrical weak spots

Replace the first paragraph by the following new paragraph:

Electrical weak spots shall be measured according to 19.3 of IEC 60674-2 with a test voltage of 150 $\text{V}/\mu\text{m}$ for types 1 and 2, and 250 $\text{V}/\mu\text{m}$ for type 3, based on the nominal thickness of the film.

Table 3 – Electrical weak spots for types 1 and 2

Replace the existing Table 3 by the following new Table 3: