

INTERNATIONAL STANDARD

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

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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FOREWORD

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IEC 60674-3-1 has been prepared by IEC technical committee 15: Solid electrical insulating materials. It is an International Standard.

This third edition cancels and replaces the second edition published in 2021. This edition constitutes a technical revision.

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

- a) this document has been completely revised editorially and technically;
- b) the ranges of film thickness have been expanded;
- c) the requirements of characteristics with the films of expanded thickness have been added.

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

Draft	Report on voting
15/1097/FDIS	15/1106/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at http://www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at <http://www.iec.ch/standardsdev/publications>.

A list of all parts in the IEC 60674 series, published under the general title *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- withdrawn, or
- revised.

INTRODUCTION

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

Part 1: Definitions and general requirements ([IEC 60674-1 \[1\]](#));

Part 2: Methods of test ([IEC 60674-2 \[2\]](#));

Part 3: Specifications for individual materials ([IEC 60674-3 \(all sheets\) \[3\]](#)).

This document contains one of the sheets comprising Part 3, as follows:

Sheet 1: Biaxially oriented (PP) polypropylene films for capacitors.

1 Scope

This sheet of IEC 60674-3 (all sheets) [3] gives the requirements for biaxially oriented polypropylene film having a smooth or rough surface, corona treated when required for vacuum metallization. The films are for use as dielectric in capacitors.

Materials which conform to this specification meet established levels of performance. However, the selection of a material by a user for a specific application is 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.

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 60674-1:1980, *Specification for plastic films for electrical purposes. Part 1: Definitions and general requirements*

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

IEC 60674-1, *Specification for plastic film for electrical purposes - Part 1: Definitions and general requirements*

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

Bibliography

- [1] IEC 60674-1, *Specification for plastic films for electrical purposes. Part 1: Definitions and general requirements*
 - [2] IEC 60674-2, *Specification for plastic films for electrical purposes - Part 2: Methods of test*
 - [3] IEC 60674-3 (all sheets), *Plastic films for electrical purposes - Part 3: Specifications for individual materials*
 - [4] ISO 1183–2:2019, *Plastics – Methods for determining the density of non-cellular plastics – Part 2: Density gradient column method*
 - [5] ISO 11357–3:2018, *Plastics – Differential scanning calorimetry (DSC) – Part 3: Determination of temperature and enthalpy of melting and crystallization*
 - [6] IEC 60674-2:2016, *Specification for plastic films for electrical purposes - Part 2: Methods of test*
 - [7] IEC 60674-1:1980, *Specification for plastic films for electrical purposes. Part 1: Definitions and general requirements*
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