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

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CONTENTS

FOREWORD 2
INTRODUCTION 4
1 Scope 5
2 Normative references 5
3 Terms and definitions 5
4 Classification 5
5 Designation 6
6 General requirements 6
7 Dimensions 6
7.1 Thickness 6
7.2 Width 7
7.3 Length/diameter 7
8 Properties 7
8.1 Physical properties 7
8.2 Electric strength (DC test) 8
8.3 Electrical weak spots 9
8.4 Thermal endurance 10
8.5 Wetting tension (types 1b + 1c, 2b + 2c and 3b + 3c only) 10
8.6 Liquid absorption 10
8.7 Compatibility with impregnants 10
8.8 Dissipation factor under impregnated conditions 11
8.9 Space factor 11
9 Roll characteristics 11
9.1 Windability 11
9.2 Joins 11
9.3 Roll width (overall width) 12
9.4 Core 12
9.5 Labelling 12
Bibliography 13

Table 1 – Physical properties 8
Table 2 – Electric strength (DC test) for types 1, 2 and 3 9
Table 3 – Electrical weak spots for types 1, 2 and 3 10
Table 4 – Maximum number of joins within a roll (types 1, 2 and 3) 12

INTERNATIONAL ELECTROTECHNICAL COMMISSION

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

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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 60674-3-1:2021. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

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*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

– IEC Electropedia: available at http://www.electropedia.org/
– ISO Online browsing platform: available at http://www.iso.org/obp

4 Classification

The polypropylene film shall be of the following types:

Type 1: having smooth surfaces (space factor < 5 %, see 8.9);

Type 1a: not corona treated;

Type 1b: one side pre-treated to facilitate the vacuum deposition of metal;

Type 1c: both sides pre-treated.