

This is a preview of "BS EN 60851-4:2016". [Click here to purchase the full version from the ANSI store.](#)

BS EN 60851-4:2016



BSI Standards Publication

Winding wires — Test methods

Part 4: Chemical properties

This is a preview of "BS EN 60851-4:2016". [Click here to purchase the full version from the ANSI store.](#)

This British Standard is the UK implementation of EN 60851-4:2016. It is identical to IEC 60851-4:2016. It supersedes BS EN 60851-4:1998 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee L/-/99, Miscellaneous Standards - Electrical.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2016.

Published by BSI Standards Limited 2016

ISBN 978 0 580 86853 5

ICS 29.060.10

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 October 2016.

Amendments/corrigenda issued since publication

Date	Text affected
-------------	----------------------

This is a preview of "BS EN 60851-4:2016". [Click here to purchase the full version from the ANSI store.](#)

EUROPÄISCHE NORM

October 2016

ICS 29.060.10

Supersedes EN 60851-4:1996

English Version

Winding wires - Test methods - Part 4: Chemical properties (IEC 60851-4:2016)

Fils de bobinage - Méthodes d'essai - Partie 4: Propriétés
chimiques
(IEC 60851-4:2016)

Wickeldrähte - Prüfverfahren - Teil 4: Chemische
Eigenschaften
(IEC 60851-4:2016)

This European Standard was approved by CENELEC on 2016-08-10. 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.

This European Standard 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

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

This is a preview of "BS EN 60851-4:2016". [Click here to purchase the full version from the ANSI store.](#)

The text of document 55/1578/FDIS, future edition 3 of IEC 60851-4, prepared by IEC/TC 55 "Winding wires" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60851-4:2016.

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) 2017-05-10
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-08-10

This document supersedes EN 60851-4:1996

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 60851-4:2016 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60264 Series	NOTE	Harmonized as EN 60264 Series.
IEC 60317 Series	NOTE	Harmonized as EN 60317 Series.
IEC 60851 Series	NOTE	Harmonized as EN 60851 Series.

This is a preview of "BS EN 60851-4:2016". [Click here to purchase the full version from the ANSI store.](#)

(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 60296	-	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear	EN 60296	-
IEC 60554-1	1977	Specification for cellulosic papers for electrical purposes - Part 1: Definitions and general requirements	-	-
IEC 60851-1	-	Winding wires - Test methods - Part 1: General	EN 60851-1	-
IEC 60851-3	2009	Winding wires - Test methods - Part 3: Mechanical properties	EN 60851-3	2009
IEC 60851-5	2008	Winding wires - Test methods - Part 5: Electrical properties	EN 60851-5	2008
ISO 9453	-	Soft solder alloys - Chemical compositions and forms	EN ISO 9453	-

This is a preview of "BS EN 60851-4:2016". [Click here to purchase the full version from the ANSI store.](#)

CONTENTS

FOREWORD.....	4
INTRODUCTION.....	6
1 Scope.....	7
2 Normative references.....	7
3 Test 12: Resistance to solvents	7
3.1 General.....	7
3.2 Equipment	8
3.3 Procedure	8
4 16: Resistance to refrigerants	9
4.1 General.....	9
4.2 Extraction	9
4.2.1 Principle	9
4.2.2 Equipment	9
4.2.3 Specimen.....	11
4.2.4 Procedure	11
4.2.5 Result.....	12
4.3 Breakdown voltage.....	12
4.3.1 Principle	12
4.3.2 Procedure	12
4.3.3 Result.....	13
5 Test 17: Solderability	13
5.1 General.....	13
5.2 Equipment	13
5.3 Procedure	14
6 Test 20: Resistance to hydrolysis and to transformer oil	14
6.1 General.....	14
6.2 Round wire	15
6.2.1 Equipment	15
6.2.2 Specimens.....	15
6.2.3 Procedure.....	15
6.3 Rectangular wire	16
6.3.1 Equipment	16
6.3.2 Specimens.....	16
6.3.3 Procedure.....	16
Annex A (informative) Alternative refrigerants to monochlorodifluoromethane.....	18
Bibliography	19
Figure 1 – Pencil and specimen for solvent test	8
Figure 2 – Refrigerant extractable test siphon cup	10
Figure 3 – Condenser coil	11
Figure 4 – Example of carrier for solderability test	14
Table 1 – Pencil hardness.....	9
Table 2 – Volume of components	16