SLOVENSKI STANDARD
SIST EN 60851-4:2001

01-september-2001

Winding wires - Test methods - Part 4: Chemical properties

Winding wires - Test methods -- Part 4: Chemical properties

Wickeldrähte - Prüfverfahren -- Teil 4: Chemische Eigenschaften

Fils de bobinage - Méthodes d'essai -- Partie 4: Propriétés chimiques

Ta slovenski standard je istoveten z: **EN 60851-4:1996**

ICS:

29.060.10 Žice Wires

SIST EN 60851-4:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60851-4

December 1996

ICS 29.060.10

Supersedes EN 60851-4:1994

Descriptors: Electrical wire, winding wire, insulated wire, chemical property

English version

Winding wires - Test methods
Part 4: Chemical properties
(IEC 851-4:1996)

Fils de bobinage - Méthodes d'essai
Partie 4: Propriétés chimiques
(CEI 851-4:1996)

Wickeldrähte - Prüfverfahren
Teil 4: Chemische Eigenschaften
(IEC 851-4:1996)

This European Standard was approved by CENELEC on 1996-10-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

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

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 55/473A/FDIS, future edition 2 of IEC 851-4, prepared by IEC TC 55, Winding wires, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60851-4 on 1996-10-01.

This European Standard supersedes EN 60851-4:1994.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 1997-07-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1997-07-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 851-4:1996 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE: When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

Publication	Year	Title	EN/HD	Year
IEC 296	1982	Specification for unused mineral insulating oils for transformers and switchgear	-	-
IEC 554-1	1977	Specification for cellulosic papers for electrical purposes - Part 1: Definitions and general requirements	-	-
IEC 851-1	1996	Winding wires - Test methods Part 1: General	EN 60851-1	1996
IEC 851-3	1996	Part 3: Mechanical properties	EN 60851-3	1996
IEC 851-5	1996	Part 5: Electrical properties	EN 60851-5	1996

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60851-4

Edition 2.1

1997-11

Edition 2:1996 consolidée par l'amendement 1:1997
Edition 2:1996 consolidated with amendment 1:1997

Fils de bobinage – Méthodes d'essai –

Partie 4: Propriétés chimiques

Winding wires – Test methods –

Part 4: Chemical properties

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE N

Pour prix, voir catalogue en vigueur
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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WINDING WIRES – TEST METHODS –

Part 4: Chemical properties

FOREWORD

1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.

3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.

4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.

5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.

6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 60851-4 has been prepared by IEC technical committee 55: Winding wires.

This second edition cancels and replaces the first edition published in 1985 and its amendment 1 (1992), and constitutes a technical revision.

This consolidated version of IEC 60851-4 is based on the second edition of IEC 60851-4 (1996) [documents 55/473A/FDIS and 55/514/RVD] and its amendment 1 (1997) [documents 55/597/FDIS and 55/614/RVD].

It bears the edition number 2.1.

A vertical line in the margin shows where the base publication has been modified by amendment 1.

INTRODUCTION

This part of IEC 60851 forms an element of a series of standards which deals with insulated wires used for windings in electrical equipment. The series has three groups describing:

a) methods of test (IEC 60851);

b) specifications (IEC 60317);

c) packaging (IEC 60264).

WINDING WIRES – TEST METHODS –
Part 4: Chemical properties

1 Scope

This part of IEC 60851 specifies the following tests:

– Test 12: Resistance to solvents;
– Test 16: Resistance to refrigerants;
– Test 17: Solderability;
– Test 20: Resistance to transformer oil.

For definitions, general notes on methods of test and the complete series of methods of test for winding wires see IEC 60851-1.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60851. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 60851 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. Members of the IEC and ISO maintain registers of currently valid International Standards.

IEC 60296: 1982, *Specification for unused mineral insulating oils for transformers and switchgear*

IEC 60554-1: 1977, *Specification for cellulosic papers for electrical purposes – Part 1: Definitions and general requirements*

IEC 60851-1: 1996, *Winding wires – Test methods – Part 1: General*

IEC 60851-3: 1996, *Winding wires – Test methods – Part 3: Mechanical properties*

IEC 60851-5: 1996, *Winding wires – Test methods – Part 5: Electrical properties*

3 Test 12: Resistance to solvents (applicable to enamelled round wire with a nominal conductor diameter over 0,250 mm and to enamelled rectangular wire)

The effect of solvent on enamel is not practicable for wires up to and including 0,250 mm. The test should only be applicable to wires over 0,250 mm.

Resistance to solvents is expressed by the pencil hardness of the wire after solvent treatment.

3.1 Equipment

The following solvents shall be used:

– standard solvent as specified below, or
– solvent as agreed between purchaser and supplier.