SRI LANKA STANDARD 1082 : Part 3.2 : 2009
IEC 60264-3-2: 1999

SPECIFICATION FOR PACKAGING OF WINDING WIRES

PART 3.2: TAPER BARRELLED DELIVERY SPOOLS – SPECIFICATION FOR RETURNABLE SPOOLS MADE FROM THERMOPLASTIC MATERIAL

(First Revision)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard

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SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
SPECIFICATION FOR PACKAGING OF WINDING WIRES
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(First Revision)

NATIONAL FOREWORD

This standard was approved by the Sectoral Committee on Electric Cables and Conductors and was authorized for adoption and publication as a Sri Lanka Standard by the Council of Sri Lanka Standards Institution on 2009-10-28.

This is the first revision of **SLS 1082 : Part 3.2 : 1995** and identical with **IEC 60264-3-2 :** Packaging of winding wires, Part 3-2: Taper barrelled delivery spools – Specification for returnable spools made from thermoplastic material, Edition 2.0 1999-04, published by the International Electrotechnical Commission (IEC).

Terminology and conventions

The text of the International Standard has been accepted as suitable for publication, without deviation, as Sri Lanka Standard. However, certain terminology and conventions are not identical with those used in Sri Lanka Standards; attention is therefore drawn to the following:

a) Wherever the words “International Standard” appear referring to this standard they should be interpreted as “Sri Lanka Standard”.

b) Wherever the page numbers are quoted they are the page numbers of IEC standard.

c) The comma has been used as a decimal marker. In Sri Lanka Standards it is the current practices to use a full point on the base line as a decimal marker.

CROSS REFERENCES

International Standards	Corresponding Sri Lanka Standards
IEC 60264 : Packaging of winding wires – Part 3-1 : Taper barrelled delivery spools - Basic dimensions of containers for taper barrelled delivery spools	SLS 1082 : Packaging of winding wires – Part 3.1 : Taper barrelled delivery spools - Basic dimensions of containers for taper barrelled delivery spools
IEC 60264: Packaging of winding wires- Part 4-1 : Method of test – Delivery spools made from thermoplastic material	SLS 1082 : Packaging of winding wires- Part 4.1 : Method of test – Delivery spools made from thermoplastic material

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NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60264-3-2

Deuxième édition
Second edition
1999-04

Conditionnement des fils de bobinage –

Partie 3-2:
Bobines de livraison à fût de forme conique – Spécification pour les bobines réutilisables, faites de matériau thermoplastique

Packaging of winding wires –

Part 3-2:
Taper barrelled delivery spools – Specification for returnable spools made from thermoplastic materials

Numéro de référence
Reference number
CEI/IEC 60264-3-2:1999

Numéros des publications

Depuis le 1er janvier 1997, les publications de la CEI sont numérotées à partir de 60000.

Publications consolidées

Les versions consolidées de certaines publications de la CEI incorporant les amendements sont disponibles. Par exemple, les numéros d'édition 1.0, 1.1 et 1.2 indiquent respectivement la publication de base, la publication de base incorporant l'amendement 1, et la publication de base incorporant les amendements 1 et 2.

Validité de la présente publication

Le contenu technique des publications de la CEI est constamment revu par la CEI afin qu'il reflète l'état actuel de la technique.

Des renseignements relatifs à la date de reconfirmation de la publication sont disponibles dans le Catalogue de la CEI.

Les renseignements relatifs à des questions à l'étude et des travaux en cours entrepris par le comité technique qui a établi cette publication, ainsi que la liste des publications établies, se trouvent dans les documents ci-dessous:

- **«Site web» de la CEI***
- **Catalogue des publications de la CEI**
  Publié annuellement et mis à jour régulièrement (Catalogue en ligne)*
- **Bulletin de la CEI**
  Disponible à la fois au «site web» de la CEI* et comme périodique imprimé

Terminologie, symboles graphiques et littéraux

En ce qui concerne la terminologie générale, le lecteur se reportera à la CEI 60050: *Vocabulaire Electrotechnique International* (VEI).

Pour les symboles graphiques, les symboles littéraux et les signes d'usage général approuvés par la CEI, le lecteur consultera la CEI 60027: *Symboles littéraux à utiliser en électrotechnique,* la CEI 60417: S*ymboles graphiques utilisables sur le matériel. Index, relevé et compilation des feuilles individuelles,* et la CEI 60617: *Symboles graphiques pour schémas.*

* Voir adresse «site web» sur la page de titre.

Numbering

As from 1 January 1997 all IEC publications are issued with a designation in the 60000 series.

Consolidated publications

Consolidated versions of some IEC publications including amendments are available. For example, edition numbers 1.0, 1.1 and 1.2 refer, respectively, to the base publication, the base publication incorporating amendment 1 and the base publication incorporating amendments 1 and 2.

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Information relating to the date of the reconfirmation of the publication is available in the IEC catalogue.

Information on the subjects under consideration and work in progress undertaken by the technical committee which has prepared this publication, as well as the list of publications issued, is to be found at the following IEC sources:

- **IEC web site***
- **Catalogue of IEC publications**
  Published yearly with regular updates (On-line catalogue)*
- **IEC Bulletin**
  Available both at the IEC web site* and as a printed periodical

Terminology, graphical and letter symbols

For general terminology, readers are referred to IEC 60050: *International Electrotechnical Vocabulary* (IEV).

For graphical symbols, and letter symbols and signs approved by the IEC for general use, readers are referred to publications IEC 60027: *Letter symbols to be used in electrical technology*, IEC 60417: *Graphical symbols for use on equipment. Index, survey and compilation of the single sheets* and IEC 60617: *Graphical symbols for diagrams.*

* See web site address on title page.

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International Electrotechnical Commission
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PACKAGING OF WINDING WIRES –

Part 3-2: Taper barrelled delivery spools – Specification for returnable spools made from thermoplastic materials

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 co-operation 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.
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International Standard IEC 60264-3-2 has been prepared by IEC technical committee 55: Winding wires.

This second edition cancels and replaces the first edition, published in 1990, and constitutes a technical revision.

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

FDIS	Report on voting
55/664/FDIS	55/684/RVD

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

INTRODUCTION

This part of IEC 60264 is one of a series which deals with insulated wires used for winding in electrical equipment. The series comprises three groups describing:

– methods of test (IEC 60851);

– specifications (IEC 60317);

– packaging (IEC 60264).

PACKAGING OF WINDING WIRES –

Part 3-2: Taper barrelled delivery spools – Specification for returnable spools made from thermoplastic materials

1 Scope

This part of IEC 60264 specifies the requirements for returnable taper barrelled delivery spools made from thermoplastic materials. Used spools are not covered by this standard.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 60264. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 60264 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60264-3-1:1989, *Packaging of winding wires – Part 3: Taper barrelled delivery spools – Section One: Basic dimensions*

IEC 60264-4-1:1997, *Packaging of winding wires – Part 4-1: Methods of test – Delivery spools made from thermoplastic materials*

3 Materials

The spools shall be made from thermoplastic materials (for example modified polystyrene) that satisfy the requirements given in this standard. The materials used shall not have a deleterious effect on the conductor or the covering of the winding wire.

4 Type designation

Taper barrelled delivery spools according to this standard shall be identified by dimensions d_1 and l_1 as specified in IEC 60264-3-1, for example as follows:

– delivery spool 60264-3-2/IEC 250/400.

5 Requirements

For test methods see IEC 60264-4-1.

5.1 Spool irregularities

5.1.1 Surface

The surface of the spool shall be smooth and the flanges free from protruding material liable to damage the wire or injure the hands of the winding operator.

5.1.2 Construction

Bolts and screws, if used in the construction of the spools, shall be countersunk so that the heads are below the surface.

5.2 Spool marking

Each spool shall have embossed and/or engraved markings, located on the top side of the upper flange, containing the following information:

a) the type designation of the spool (for example 60264-3-2/IEC 250/400);

b) name and/or trade mark of the spool manufacturer;

c) the nominal mass of the spool in grams;

d) the year of manufacture.

The upper flange shall be designed so as to allow the application of labels giving details of the winding wire manufacturer, its size, the mass of winding wire on the spool, etc.

5.3 Mass

The mass of the spool shall comply with the value given in table 1.

Table 1 – Mass

Spool type	Mass	
	Nominal mass g	Tolerance %
200/315	1 250	±2
250/400	2 250	±2
315/500	4 350	±2
400/630	7 300	±2

5.4 Spool dimensions

The spool dimensions and tolerances shall comply with the dimensions and tolerances given in IEC 60264-3-1.

5.5 True running deviations

The true running deviations shall not exceed the value given in table 1 of IEC 60264-3-1 (under y and z).

5.6 Behaviour at elevated temperature

The spool shall be conditioned at a temperature of (60 ± 3) °C.

The spool dimensions and tolerances shall comply with the dimensions and tolerances given in IEC 60264-3-1.

No swelling, buckling or variation in the flanges or in the barrel is permitted.

5.7 Impact test on flanges

5.7.1 Under normal ambient conditions

The function of the spool shall not be destroyed after stressing with the value given in table 2.

Table 2 – Impact test

Spool type	Mass kg	Energy Nm
200/315	3,0	35
250/400	3,0	40
315/500	3,0	45
400/630	3,0	50

5.7.2 At reduced temperature

The spool shall be conditioned at a temperature from –10 °C to –12 °C. The function of the spool shall not be destroyed after stressing with 70 % of the value given in table 2.

After conditioning at a temperature of (–25 ± 3) °C the function of the spool shall not be destroyed after stressing with 50 % of the value given in table 2.

5.8 Deformation under load

When stressed with the load specified in table 3, the elongation shall not exceed the value given in table 3.

Table 3 – Deformation

Spool type	Minimum tensile load kN	Maximum elongation mm
200/315	20	3,15
250/400	30	4,0
315/500	50	5,0
400/630	60	6,3

5.9 Flexibility test on flanges

When stressed with the load specified in table 4, the increase in distance between the flanges during and after stressing shall not exceed the value given in table 4.

Table 4 – Increase in distance

Spool type	Load kN	Maximum increase in distance between flanges mm	
		During stressing	After stressing
200/315	8	5	0,63
250/400	12,5	5	0,63
315/500	20	7,1	0,63
400/630	25	5	0,63

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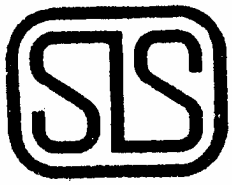

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SRI LANKA STANDARDS INSTITUTION

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