

Blankets of insulating material for electrical purposes

ICS 13.260

National foreword

This Draft for Development is the official English language version of ENV 61112:2001.

This publication is not to be regarded as a British Standard.

It is being issued in the Draft for Development series of publications and is of a provisional nature. It was developed by CENELEC as a potential full standard but was never completed. The work has now been transferred to IEC (International Electrotechnical Commission). The CENELEC committee decided it should be published on a provisional basis, so that information and experience of its practical application may be obtained. Users are still encouraged to use BS IEC 61112:1992, *Blankets of insulating material for electrical purposes*.

Comments arising from the use of this Draft for Development are requested so that UK experience can be reported to the European organization responsible for its conversion onto a European Standard. A review of this publication will be initiated 2 years after its publication by the European organization so that a decision can be taken on its status at the end of its three-year life. The commencement of the review period will be notified by an announcement in *Update Standards*.

According to the replies received by the end of the review period, the responsible BSI Committee will decide whether to support the conversion into a European Standard, to extend the life of the prestandard or to withdraw it. Comments should be sent in writing to the Secretary of BSI Technical Committee PEL/78, Tools for live working, at 389 Chiswick High Road, London W4 4AL, giving the document reference and clause number and proposing, where possible, an appropriate revision of the text.

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

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

Summary of pages

This document comprises a front cover, an inside front cover, the ENV title page, pages 2 to 23, and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.

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Amendments issued since publication

Amd. No.	Date	Comments

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Blankets of insulating material for electrical purposes
(IEC 61112:1992 + corrigendum 2000, modified)

Nappes en matériau isolant pour travaux
électriques
(CEI 61112:1992 + corrigendum 2000,
modifiée)

Abdecktücher aus isolierendem Material
zum Arbeiten unter Spannung
(IEC 61112:1992 + Corrigendum 2000,
modifiziert)

This European prestandard was approved by CENELEC on 2001-03-24 as a prospective standard for provisional application. The period of validity of this ENV is limited initially to three years. After two years the members of CENELEC will be requested to submit their comments, particularly on the question whether the ENV can be converted into a European Standard (EN).

CENELEC members are required to announce the existence of this ENV in the same way as for an EN and to make the ENV available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force (in parallel to the ENV) until the final decision about the possible conversion of the ENV into an EN is reached.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, 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

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Foreword

The text of the International Standard IEC 61112:1992 + corrigendum May 2000, prepared by IEC TC 78, Tools for live working, together with the common modifications prepared by the Technical Committee CENELEC TC 78, Equipment and tools for live working, was submitted to the CENELEC questionnaire and vote procedure and was approved by CENELEC as ENV 61112 on 2001-03-24.

The following date was fixed:

- latest date by which the existence of the ENV
has to be announced at national level (doa) 2001-07-01

Annexes designated "normative" are part of the body of the prestandard.

Annexes designated "informative" are given only for information.

In this prestandard, annexes A, B, C, D, E and ZA are normative, annexes F, and G are informative.

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61112:1992 + corrigendum May 2000 was approved by CENELEC as a European Prestandard with agreed common modifications as given below.

COMMON MODIFICATIONS

Contents

Add "and tolerances" to the title of 6.2.

Replace the title of 8.5 by "Category M: Mechanical puncture resistance".

Add "(normative)" after annex A, annex B, annex C, annex D and annex E.

Add "(informative)" after annex F and annex G.

Add a new annex ZA

Annex ZA (normative) - Normative references to international publications with their corresponding European publications

1 Scope

1.1 **Replace** the text by:

Six classes of blankets differing in electrical characteristics, are provided and designated as class 00, class 0, class 1, class 2, class 3 and class 4.

2 Normative references

Replace by:

NOTE Normative references to International publications are listed in annex ZA (normative).

3 Definitions

3.6 **Replace** "nominal voltage" by "nominal voltage of a system".

3.8 **Replace** by:

3.8

proof test

a test during which a specified voltage is applied to a device for the time defined under specified conditions to assure that the electrical strength of the insulation is above the specified value

3.12 **Replace** by:

3.12

withstand test

a test during which the device must withstand without flashover, disruptive discharge, puncture or other electric failure a voltage applied under specified conditions

Add:

3.13

usable area

the blanket area that protects the worker against electric shock and that is verified by the proof test

- 4 **Add** at the end of the paragraph: « They should not reduce the electrode clearance ».

5 Classification

Replace the first line starting with a dash by:

- by class as class 00, class 0, class 1, class 2, class 3 and class 4;

Replace the second paragraph by:

Guidance for the selection of class is given in annex E.

Delete in Table 1, for M, "(higher level reinforced)".

6 Physical requirements

Replace 6.2, 6.3, including Table 3, and 6.4 by:

6.2 Dimensions and tolerances

Recommended dimensions for blankets are indicated in Table 2.

Table 2 - Recommended dimensions for blankets

Plain blanket		Slotted blanket		Blanket in rolls
length mm	width mm	length mm	width mm	width mm
910	305	-	-	60*, 90*, 1 000, 1 300, 2 000
560	560	560	560	
910	690	910	910	
910	910	-	-	
2 280	910	1 160	1 160	
* To be produced in class 00 and class 0 only				

Permissible variations in length and width shall be ± 15 mm except for the 1 160 mm x 1 160 mm slotted size for which the permissible variation is ± 25 mm. Permissible variations for rolls of 60 mm and 90 mm in width shall be ± 2 mm

For blankets with dimensions different from those recommended in Table 2, tolerances of ± 2 % are required.

6.3 Thickness

6.3.1 The maximum thickness of a blanket shall be limited in order to obtain appropriate flexibility and in order to pass the test defined in 7.6.2 (low temperature test).

6.3.2 The minimum thickness shall be determined only by the ability to pass the tests defined in clauses 7 and 8.

6.4 *Workmanship and finish*

Blankets shall be free on both surfaces from harmful physical irregularities that can be detected by the tests carried out according to this prestandard.
Harmful and non-harmful physical irregularities are described in annex G (In-service recommendations).

Add at the end of the subclause:

« Where eyelets are present, they should not reduce the electrode clearance ».

6.5 **Replace** 6.5.1 by:

6.5.1 Each blanket which is claimed to comply with the requirements of this Prestandard shall be marked at least on one surface with the following:

- a) symbol (double triangle) (see annex A);
- b) name, trademark, or identification of the manufacturer;
- c) category, if applicable;
- d) size (length and width);
- e) class designation;
- f) month and year of manufacture;
- g) usable area (see Figures 1 and 2), except for class 00 and class 0. (On rolls the usable area shall be marked along the two sides only).

In addition each blanket shall have a group of rectangles or other suitable means to identify when the blanket was put into service and the dates of periodic inspection and testing.

The usable area shall be visibly and permanently identified, for example by a line around the usable area which has a minimum thickness of 3 mm.

In the case of rolls, they shall bear on one border at least every metre all the above markings, except d).

6.5.2 **Delete** the second paragraph.

6.5.4 **Add** "and of the limit of usable area" after "(double triangle)".

Add in the second paragraph "Class 00 - beige".

6.6 **Replace** in the first paragraph "an individual container or package" by "containers or packages".

Add after the first paragraph:

Instructions for use shall be included in the package.

7 **Tests on blankets**

7.1 **Replace** in the second paragraph the word "clauses" by "subclauses".

Replace the last three paragraphs by:

The test location conditions shall be in accordance with IEC 60160, clause 4 (temperature from 15 °C to 35 °C and relative humidity from 45 % to 75 %).

Unless otherwise specified, blankets shall be conditioned for a period of 2 h ± 0,5 h at a temperature of 23 °C ± 2 °C and relative humidity of 50 % ± 5 % (see IEC 60212, standard atmosphere B).

Conditioning shall be performed on complete blankets or on test pieces.

Unless otherwise specified, the tolerances for any measured value shall be ± 5 %.

In case of rolls having a width less than 150 mm, the test piece shall have one dimension equal to the width.

Samples, units and test pieces submitted to non destructive tests can be re-used for other tests. Samples, units and test pieces submitted to destructive tests shall be scrapped.

7.2.3 **Replace** by "Void".

7.2.5 **Replace** the text by:

Type test and routine test (see 6.5)

The marking shall be verified by visual inspection and durability test for type test. (« visual inspection » means inspection by a person with normal vision without additional magnification). No durability test is required for routine test.

The durability of the marking is checked by rubbing the marking for 15 s with a piece of lint-free cloth soaked in soapy water and then rubbing it for a further 15 s with a piece of lint-free cloth soaked in ethyl alcohol. At the end of the test, the marking shall remain legible.

7.3.2 **Replace** the last paragraph before the notes by:

The average of the four test pieces shall not be less than 150 %.

7.3.3 **Add** in the first paragraph "(max. 25 mm)", after "6 mm".

Replace in the last paragraph "class 0" by "class 00 or class 0".

Add a note at the end of the subclause:

NOTE The test procedure and the proposed values are under consideration.

7.3.4 **Replace** the first sentence by:

This test applies only to blankets made of elastomer.

7.3.5 **Delete** the second sentence of the second paragraph.