

SLOVENSKI STANDARD
SIST EN 60811-508:2012/A1:2018
01-januar-2018

**Električni in optični kabli - Preskusne metode za nekovinske materiale - 508. del:
Mehanski preskusi - Tlačni preskus izolacije in plaščev pri visoki temperaturi -
Dopolnilo A1 (IEC 60811-508:2012/A1:2017)**

Electric and optical fibre cables - Test methods for non-metallic materials - Part 508:
Mechanical tests - Pressure test at high temperature for insulation and sheaths (IEC
60811-508:2012/A1:2017)

**Kabel, isolierte Leitungen und Glasfaserkabel - Prüfverfahren für nichtmetallene
Werkstoffe - Teil 508: Mechanische Prüfungen - Wärmedruckprüfungen für Isolierhüllen
und Mäntel (IEC 60811-508:2012/A1:2017)**

[SIST EN 60811-508:2012/A1:2018](https://standards.itih.ai/catalog/standards/sist/2d6ec78f-da0e-45ed-b717-)

**Câbles électriques et à fibres optiques - Méthodes d'essai pour les matériaux non-
métalliques - Partie 508: Essais mécaniques - Essai de pression à température élevée
pour enveloppes isolantes et les gaines (IEC 60811-508:2012/A1:2017)**

Ta slovenski standard je istoveten z: EN 60811-508:2012/A1:2017

ICS:

29.035.01	Izolacijski materiali na splošno	Insulating materials in general
29.060.20	Kabli	Cables

SIST EN 60811-508:2012/A1:2018 **en**

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EUROPEAN STANDARD

EN 60811-508:2012/A1

NORME EUROPÉENNE

EUROPÄISCHE NORM

November 2017

ICS 29.035.01; 29.060.20

English Version

**Electric and optical fibre cables - Test methods for non-metallic materials - Part 508: Mechanical tests - Pressure test at high temperature for insulation and sheaths
(IEC 60811-508:2012/A1:2017)**

Câbles électriques et à fibres optiques - Méthodes d'essai pour les matériaux non-métalliques - Partie 508: Essais mécaniques - Essai de pression à température élevée pour enveloppes isolantes et les gaines
(IEC 60811-508:2012/A1:2017)

Kabel, isolierte Leitungen und Glasfaserkabel - Prüfverfahren für nichtmetallene Werkstoffe - Teil 508: Mechanische Prüfungen - Wärmedruckprüfungen für Isolierhüllen und Mäntel
(IEC 60811-508:2012/A1:2017)

This amendment A1 modifies the European Standard EN 60811-508:2012; it was approved by CENELEC on 2017-08-25. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment 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 amendment 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.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

EN 60811-508:2012/A1:2017**European foreword**

The text of document 20/1735/FDIS, future IEC 60811-508:2012/A1, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-508:2012/A1:2017.

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) 2018-05-25
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-08-25

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The text of the International Standard IEC 60811-508:2012/A1:2017 was approved by CENELEC as a European Standard without any modification.

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IEC 60811-508

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

AMENDMENT 1
AMENDEMENT 1

**Electric and optical fibre cables – Test methods for non-metallic materials –
Part 508: Mechanical tests – Pressure test at high temperature for insulation
and sheaths**

**Câbles électriques et à fibres optiques – Méthodes d'essai pour les matériaux
non-métalliques –
Partie 508: Essais mécaniques – Essai de pression à température élevée pour
les enveloppes isolantes et les gaines**

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FOREWORD

This amendment has been prepared by IEC technical committee 20: Electric cables.

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

FDIS	Report on voting
20/1735/FDIS	20/1740/RVD

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

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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4.2.1 Air oven

Delete NOTE 1

Replace NOTE 2 by the following new NOTE:

NOTE Thermoplastic materials with a sharp melting point (as some ethylene polymers) can experience a large increase in indentation with a small temperature rise above the specified test temperature.

4.2.2 Indentation device

Replace, in the second sentence, "with an edge" by "with a flat edge"

4.3.2.5 Measurement

Replace the fourth paragraph by the following new text:

The strip shall be laid flat under a measuring microscope, a measuring projector, or an optical digital image analyser of at least 10 × magnification. The cross-wire shall be adjusted to the bottom of the indentation and the outside of the test piece as shown in the same figure. In case of doubt, the measuring microscope shall be taken as the reference method.

A reading of 0,01 mm and an estimated reading to three decimal places shall be used when measuring insulation with a specified thickness less than 0,7 mm.

NOTE 1 A test method using a dial micrometer is under consideration.

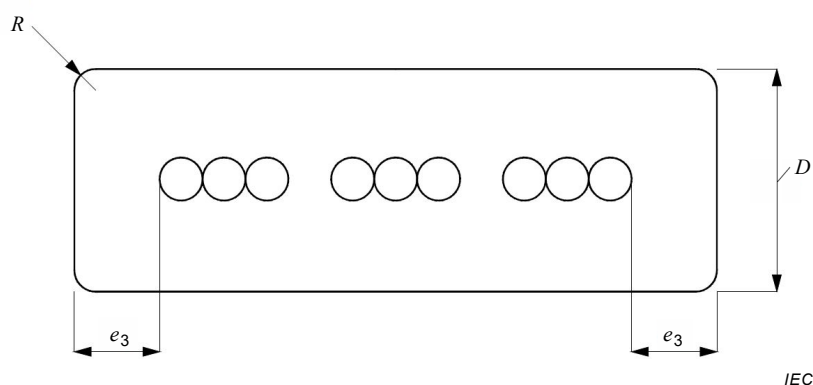
Renumber the existing NOTE, at the end of the subclause, as "NOTE 2"

4.4.1 Sample and test piece preparation for sheaths

Replace, in NOTE 2, "Insulation" by "Sheath"

5 Test report

Replace Figure 4 by the following new Figure 4:



Key

- e_3 mean sheath thickness
- R radius of the corner
- D minor dimension

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Figure 4 – Flat cable with a flat smaller side

<https://standards.iteh.ai/catalog/standards/sist/2d6ec78f-da0e-45ed-b717-ee1853f1887f/sist-en-60811-508-2012-a1-2018>

Annex A

Replace the first five paragraphs, including Table A.1, by the following new text and Table A.1:

The minimum force F , in N, which shall be exerted by the blade upon the test piece, shall be given by the formula:

$$F = k\sqrt{2 D \delta - \delta^2}$$

where

- k is a coefficient which shall be specified in the standard for the type of cable;
- δ is the value of the thickness of the insulation or the sheath, as measured on the test piece, in millimetres;
- D is the mean value of the outer diameter of the test piece (insulation) or the mandrel diameter plus twice the thickness (sheath), in millimetres.

If a value of k is not specified in the cable standard, it shall be taken from Table A.1.

Table A.1 – General value for k

k	Insulation	Sheath
0,6	Flexible cables and cores of flexible cables Cores, with $D \leq 15$ mm, for cables for fixed installations	Flexible cables and cables Cables for fixed installation having a value $D \leq 15$ mm
0,7	Cores, with $D > 15$ mm, and for sector-shaped cores for cables for fixed installations	Cables for fixed installation having a value $D > 15$ mm

The force applied upon the piece of flat cable without sheath as described in 4.3.1 and with conductor size $< 10 \text{ mm}^2$ shall be twice the value given by the above formula in a twin core cable, where D is the mean value of the minor dimension of the test piece, or multiplied by the number of cores if more than two cores (see Figure 4).

The thickness δ shall be measured on a thin slice of the test piece as close as possible to the intended point of indentation.

For flat cables without sheath, D is determined by calculating the mean diameter using the individual cores of the largest size.

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