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BSI Standards Publication

Electric and optical fibre cables — Test methods for non-metallic materials

Part 501: Mechanical tests — Tests for determining the mechanical properties of insulating and sheathing compounds

bsi.

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National foreword

This British Standard is the UK implementation of EN 60811-501:2012+A2:2023. It is identical to IEC 60811-501:2012, incorporating amendment 1:2018 and amendment 2:2023. It supersedes BS EN 60811-501:2012+A1:2018, which will be withdrawn on 7 December 2026.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by ⟨A1⟩ ⟨A1⟩.

The UK participation in its preparation was entrusted to Technical Committee GEL/20/17, Electric Cables - Low voltage.

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

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ICS 29.035.01; 29.060.20

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This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 July 2012.

Amendments/corrigenda issued since publication

Date	Text affected
30 November 2018	Implementation of IEC amendment 1:2018 with CENELEC endorsement A1:2018
31 January 2024	Implementation of IEC amendment 2:2023 with CENELEC endorsement A2:2023

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2023

ICS 29.035.01; 29.060.20

Supersedes EN 60811-1-1:1995 (partially)
+ A1:2001 (partially)

English Version

Electric and optical fibre cables – Test methods for non-metallic materials – Part 501: Mechanical tests – Tests for determining the mechanical properties of insulating and sheathing compounds (IEC 60811-501:2012)

Câbles électriques et à fibres optiques – Méthodes d'essai pour les matériaux non-métalliques – Partie 501: Essais mécaniques – Détermination des propriétés mécaniques des mélanges pour les enveloppes isolantes et les gaines (CEI 60811-501:2012)

Kabel, isolierte Leitungen und Glasfaserkabel – Prüfverfahren für nichtmetallene Werkstoffe – Teil 501: Mechanische Prüfungen – Prüfungen zur Bestimmung der mechanischen Eigenschaften von Isolier- und Mantelwerkstoffen (IEC 60811-501:2012)

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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

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Ref. No. EN 60811–501:2012+A1:2018: E

This is a preview of BS EN 60811-501:2012+A2:2023. Click here to purchase the full version from the ANSI store.

European Foreword

The text of document 20/1297/FDIS, future edition 1 of IEC 60811–501, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811–501:2012.

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)	2013-01-17
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2015-04-17

This document supersedes Clause 9 of EN 60811–1–1:1995 + A1:2001 (partially). Full details of the replacements are shown in Annex A of EN 60811–100:2012.

EN 60811–501:2012 includes the following significant technical change with respect to EN 60811–1–1:1995:

– the requirements for the (minimum) thickness of dumb-bell test pieces have changed.

See also the Foreword to EN 60811–100.

This standard is to be read in conjunction with EN 60811–100.

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.

This standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

Endorsement notice

The text of the International Standard IEC 60811–501:2012 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60811–1–1:1993	NOTE	Harmonized as EN 60811–1–1:1995 (not modified).

This is a preview of BS EN 60811-501:2012+A2:2023. Click here to purchase the full version from the ANSI store.

European foreword to amendment A1

The text of document 20/1795/FDIS, future IEC 60811–501/A1, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811–501:2012/A1:2018.

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) 2019-04-20
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2021-07-20

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The text of the International Standard IEC 60811–501:2012/A1:2018 was approved by CENELEC as a European Standard without any modification.

European foreword to Amendment A2

The text of document 20/2128/FDIS, future IEC 60811-501/AMD2, prepared by IEC/TC 20 "Electric cables" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60811-501:2012/A2:2023.

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) 2024-09-07
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2026-12-07

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Annex ZA
(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 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 60811–100	2012	Electric and optical fibre cables – Test methods for non-metallic materials – Part 100: General	EN 60811–100	2012
IEC 60811–201	–	Electric and optical fibre cables – Test methods for non-metallic materials – Part 201: General tests – Measurement of insulation thickness	EN 60811–201	–
IEC 60811–202	–	Electric and optical fibre cables – Test methods for non-metallic materials – Part 202: General tests – Measurement of thickness of non-metallic sheath	EN 60811–202	–
IEC 60811–203	–	Electric and optical fibre cables – Test methods for non-metallic materials – Part 203: General tests – Measurement of overall dimensions	EN 60811–203	–
IEC 60811–401	–	Electric and optical fibre cables – Test methods for non-metallic materials – Part 401: Miscellaneous tests – Thermal ageing methods – Ageing in an air oven	EN 60811–401	–
IEC 60811–404	–	Electric and optical fibre cables – Test methods for non-metallic materials – Part 404: Miscellaneous tests – Mineral oil immersion tests for sheaths	EN 60811–404	–
IEC 60811–606	–	Electric and optical fibre cables – Test methods for non-metallic materials – Part 606: Physical tests – Methods for determining the density	EN 60811–606	–

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FOREWORD

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International Standard IEC 60811-501 has been prepared by IEC technical committee 20: Electric cables.

This Part 501 of IEC 60811 cancels and replaces Clause 9 of IEC 60811-1-1:1993, which is withdrawn. Full details of the replacements are shown in Annex A of IEC 60811-100:2012.

There is one significant technical change with respect to the previous edition:

— the requirements for the (minimum) thickness of dumb-bell test pieces have changed.

See also the Foreword to IEC 60811-100.

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