



SLOVENSKI STANDARD SIST EN ISO 19630:2021

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Nadomešča:

SIST EN 1007-4:2004

SIST EN 1007-4:2004/AC:2007

Fina keramika (sodobna keramika, sodobna tehnična keramika) - Preskusne metode za ojačitve - Ugotavljanje nateznih lastnosti vlaken pri sobni temperaturi (ISO 19630:2017)

Fine ceramics (advanced ceramics, advanced technical ceramics) - Methods of test for reinforcements - Determination of tensile properties of filaments at ambient temperature (ISO 19630:2017)

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Hochleistungskeramik - Verfahren zur Prüfung der Faserverstärkungen - Bestimmung der Zugeigenschaften von Endlofasern bei Raumtemperatur (ISO 19630:2017)

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Céramiques techniques - Méthodes d'essai pour renforts - Détermination des propriétés en traction du filament à température ambiante (ISO 19630:2017)

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81.060.30 Sodobna keramika Advanced ceramics

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EUROPEAN STANDARD

EN ISO 19630

NORME EUROPÉENNE

EUROPÄISCHE NORM

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ICS 81.060.30

Supersedes EN 1007-4:2004

English Version

Fine ceramics (advanced ceramics, advanced technical ceramics) - Methods of test for reinforcements - Determination of tensile properties of filaments at ambient temperature (ISO 19630:2017)

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This European Standard was approved by CEN on 11 July 2021.

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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 CEN 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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COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

The text of ISO 19630:2017 has been prepared by Technical Committee ISO/TC 206 "Fine ceramics" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 19630:2021 by Technical Committee CEN/TC 184 "Advanced technical ceramics" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2022, and conflicting national standards shall be withdrawn at the latest by January 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 1007-4:2004.

Any feedback and questions on this document should be directed to the users' national standards body. A complete listing of these bodies can be found on the CEN website.

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The text of ISO 19630:2017 has been approved by CEN as EN ISO 19630:2021 without any modification.

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INTERNATIONAL
STANDARD

ISO
19630

First edition
2017-07

**Fine ceramics (advanced ceramics,
advanced technical ceramics) —
Methods of test for reinforcements —
Determination of tensile properties of
filaments at ambient temperature**

*Céramiques techniques — Méthodes d'essai pour renforts —
Détermination des propriétés en traction du filament à température
ambiante*

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see the following URL: www.iso.org/iso/foreword.html. (standards.iteh.ai)

This document was prepared by Technical Committee ISO/TC 206, *Fine ceramics*.

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Fine ceramics (advanced ceramics, advanced technical ceramics) — Methods of test for reinforcements — Determination of tensile properties of filaments at ambient temperature

1 Scope

This document specifies the conditions for the determination of tensile properties of single filaments of ceramic fibre such as tensile strength, Young modulus and fracture strain. The method applies to continuous ceramic filaments taken from tows, yarns, braids and knittings, which have strain to fracture less than or equal to 5 %.

The method does not apply to carbon fibres that exhibit nonlinear stress-strain curve. The method does not apply to checking the homogeneity of strength properties of fibres, nor to assessing the effects of volume under stress. Statistical aspects of filament failure are not included.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7500-1, *Metallic materials — Calibration and verification of static uniaxial testing machines — Part 1: Tension/compression testing machines — Calibration and verification of the force-measuring system*

ISO 19634, *Fine ceramics (advanced ceramics, advanced technical ceramics) — Ceramic composites — Notations and symbols*

ISO 20501, *Fine ceramics (advanced ceramics, advanced technical ceramics) — Weibull statistics for strength data*

EN 1007-1, *Advanced technical ceramics — Ceramic composites — Methods of test for reinforcements — Part 1: Determination of size content*

EN 1007-3, *Advanced technical ceramics — Ceramic composites — Methods of test for reinforcements — Part 3: Determination of filament diameter and cross-section area*

3 Terms, definitions and symbols

For the purposes of this document, the terms, definitions and symbols given in ISO 19634 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— IEC Electropedia: available at <http://www.electropedia.org/>

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

gauge length

L_0

initial distance between two reference points on the filament