

Advanced technical ceramics - Mechanical properties of ceramic fibres at high temperature in a non-reactive environment - Determination of creep behaviour by the cold grip method

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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EUROPEAN STANDARD

EN 15365

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English Version

Advanced technical ceramics - Mechanical properties of ceramic fibres at high temperature in a non-reactive environment - Determination of creep behaviour by the cold grip method

Céramiques techniques avancées - Propriétés mécaniques des fibres céramiques à haute température sous environnement non réactif - Détermination du comportement au fluage par la méthode des mors froids

Hochleistungskeramik - Mechanische Eigenschaften von Keramikfasern bei hohen Temperaturen in einer reaktionsfreien Umgebung - Bestimmung des Kriechverhaltens im Kaltverbindungsverfahren

This European Standard was approved by CEN on 24 November 2025.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 15365:2025) has been prepared 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of an identical text or by endorsement, at the latest by June 2026 and conflicting national standards shall be withdrawn at the latest by June 2026.

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 15365:2010.

EN 15365:2025 includes the following significant changes with respect to EN 15365:2010:

- a) the title was updated;
- b) the normative references were updated;
- c) the Bibliography was updated;
- d) the document was editorially revised.

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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1 Scope

This document specifies the conditions for the determination of the tensile creep deformation and failure behaviour of single filaments of ceramic fibres at high temperature and under test conditions that prevent changes to the material as a result of chemical reaction with the test environment.

This document is applicable to continuous ceramic filaments taken from tows, yarns, braids and knittings, which have strains to fracture less than or equal to 5 %.

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.

EN 60584 (all parts), *Thermocouples*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

- ISO Online browsing platform: available at <https://www.iso.org/obp/>
- IEC Electropedia: available at <https://www.electropedia.org/>

3.1

creep

time-dependent increase of gauge length starting from the time when the constant specified level of force is reached

3.2

creep threshold temperature

T_t

minimum temperature at which creep is detected

3.3

specimen temperature

T

temperature which varies along the fibre length in the cold grips case

Note 1 to entry: See 8.2.

3.4

specimen temperature in the zone

T_i

temperature defined as: $T_t \leq T_i \leq T_t + i \Delta T$

3.5

total length

L

total length of the ceramic filament between the grips