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STN	**Jemná keramika (špeciálna keramika, špeciálna technická keramika) Mechanické vlastnosti keramických kompozitov pri izbovej teplote Stanovenie pevnosti v ohybe (ISO 17138: 2025)**	**STN EN ISO 17138** 72 7519

Fine ceramics (advanced ceramics, advanced technical ceramics) - Mechanical properties of ceramic composites at room temperature - Determination of flexural strength (ISO 17138:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 02/26

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English Version

Fine ceramics (advanced ceramics, advanced technical ceramics) - Mechanical properties of ceramic composites at room temperature - Determination of flexural strength (ISO 17138:2025)

Céramiques techniques - Propriétés mécaniques des composites céramiques à température ambiante - Détermination de la résistance en flexion (ISO 17138:2025)

Hochleistungskeramik - Mechanische Eigenschaften von keramischen Verbundwerkstoffen bei Raumtemperatur - Bestimmung der Biegefestigkeit (ISO 17138:2025)

This European Standard was approved by CEN on 6 June 2025.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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

Ref. No. EN ISO 17138:2025 E

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European foreword

This document (EN ISO 17138:2025) has been prepared by Technical Committee ISO/TC 206 "Fine ceramics" in collaboration with 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of an identical text or by endorsement, at the latest by May 2026, and conflicting national standards shall be withdrawn at the latest by May 2026.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.

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Endorsement notice

The text of ISO 17138:2025 has been approved by CEN as EN ISO 17138:2025 without any modification.

International Standard

ISO 17138

Fine ceramics (advanced ceramics, advanced technical ceramics) — Mechanical properties of ceramic composites at room temperature — Determination of flexural strength

Céramiques techniques — Propriétés mécaniques des composites céramiques à température ambiante — Détermination de la résistance en flexion

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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This document was prepared by ISO/TC 206, *Fine ceramics,* in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 184, *Advanced technical ceramics,* in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 17138:2014) which has been technically revised.

The main changes are as follows:

— Clause 2 updated;

— Clause 4 on Significance and use added;

— Clause 10 updated;

— editorially revised.

Any feedback or questions on this document should be directed to the user’s national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

International Standard **ISO 17138:2025(en)**

Fine ceramics (advanced ceramics, advanced technical ceramics) — Mechanical properties of ceramic composites at room temperature — Determination of flexural strength

1 Scope

This document specifies a test method for the determination of the flexural strength of ceramic matrix composite materials with continuous fibre reinforcement, under three-point or four-point bend at room temperature. This document is applicable to all ceramic matrix composites with a continuous fibre reinforcement, unidirectional (1D), bidirectional (2D), and tridirectional *x*D with ($2 < x \leq 3$) as defined in ISO 19634, loaded along one principal axis of reinforcement.

This document is not intended to be used to obtain absolute values of strength for design purposes.

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 3611, *Geometrical product specifications (GPS) — Dimensional measuring equipment — Design and metrological characteristics of micrometers for external measurements*

ISO 19634, *Advanced technical ceramics — Ceramic composites — Notations and symbols*