Aerospace series - Polyetheretherketone with 55 % continuous carbon fibre by volume (PEEK-CF55) - Stock shape material - Material specification

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 4717:2022 sisaldab Euroopa standardi EN 4717:2022 ingliskeelset teksti.	This Estonian standard EVS-EN 4717:2022 consists of the English text of the European standard EN 4717:2022.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 30.03.2022.	Date of Availability of the European standard is 30.03.2022.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

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EUROPEAN STANDARD

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English Version

Aerospace series - Polyetheretherketone with 55 % continuous carbon fibre by volume (PEEK-CF55) - Stock shape material - Material specification

Série aérospatiale - Polyétheréthercétone avec 55 % de fibre de carbone continue par volume (PEEK-CF55) - Demi-produit - Spécification de matériau

Luft- und Raumfahrt - Polyetheretherketon mit 55 Volumen % (PEEK-CF55) endlos Kohlenstofffaser - Halbfabrikat - Materialspezifikation

This European Standard was approved by CEN on 25 July 2021.

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

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

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European foreword

This document (EN 4717:2022) has been prepared by the Aerospace and Defence Industries Association of Europe — Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this document has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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

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1 Scope

This document specifies the requirements of a thermoplastic composite stock shape material (e.g. tape, rod, etc.) consisting of polyetheretherketone with 55 % continuous carbon fibres by volume (PEEK–CF55) for aerospace applications, which is presupposed to be used in a further thermal moulding process for forming parts described in EN 4714 [1)].

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 2564, *Aerospace series — Carbon fibre laminates — Determination of the fibre, resin and void contents*

EN 2825, *Aerospace series — Burning behaviour of non metallic materials under the influence of radiating heat and flames — Determination of smoke density*

EN 2826, *Aerospace series — Burning behaviour of non metallic materials under the influence of radiating heat and flames — Determination of gas components in the smoke*

EN 3844-1, *Aerospace series — Flammability of non-metallic materials — Part 1: Small burner test, vertical — Determination of the vertical flame propagation*

EN 4714, *Aerospace series — Screws, bolts and nuts of continuous fibre reinforced PAEK (Polyaryletherketone) composite material — Technical specification* [1)]

ISO 75-3, *Plastics — Determination of temperature of deflection under load — Part 3: High-strength thermosetting laminates and long-fibre-reinforced plastics* [2)]

ISO 175, *Plastics — Methods of test for the determination of the effects of immersion in liquid chemicals* [2)]

ISO 291, *Plastics — Standard atmospheres for conditioning and testing* [2)]

ISO 1183-1, *Plastics — Methods for determining the density of non-cellular plastics — Part 1: Immersion method, liquid pycnometer method and titration method* [2)]

ISO 1817, *Rubber, vulcanized or thermoplastic — Determination of the effect of liquids* [2)]

ISO 3597-2, *Textile-glass-reinforced plastics — Determination of mechanical properties on rods made of roving-reinforced resin — Part 2: Determination of flexural strength* [2)]

ISO 11357-3, *Plastics — Differential scanning calorimetry (DSC) — Part 3: Determination of temperature and enthalpy of melting and* crystallization [2)]

ISO 14125, *Fibre-reinforced plastic composites — Determination of flexural properties* [2)]

ASTM D4018-17, *Standard Test Methods for Properties of Continuous Filament Carbon and Graphite Fiber Tows* [3)]

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1) In preparation at the date of publication of this document.

2) Published by: ISO International Organization for Standardization http://www.iso.ch/.

3) Published by: ASTM International (US) American Society for Testing and Materials, https://www.astm.org/.