

Plastics - Poly(vinyl chloride) (PVC) based profiles -
Determination of the strength of welded corners and
T-joints

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>See Eesti standard EVS-EN 514:2025 sisaldab Euroopa standardi EN 514:2025 ingliskeelset teksti.</p> <p>Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.</p> <p>Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 14.05.2025.</p> <p>Standard on kättesaadav Eesti Standardimis- ja Akrediteerimiskeskusest.</p>	<p>This Estonian standard EVS-EN 514:2025 consists of the English text of the European standard EN 514:2025.</p> <p>This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.</p> <p>Date of Availability of the European standard is 14.05.2025.</p> <p>The standard is available from the Estonian Centre for Standardisation and Accreditation.</p>
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EUROPEAN STANDARD

EN 514

NORME EUROPÉENNE

EUROPÄISCHE NORM

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Supersedes EN 514:2018

English Version

**Plastics - Poly(vinyl chloride) (PVC) based profiles -
Determination of the strength of welded corners and T-
joints**

Plastiques - Profilés à base de poly(chlorure de vinyle)
(PVC) - Détermination de la résistance des
assemblages soudés en angles et en T

Kunststoffe - Profile auf Basis von Polyvinylchlorid
(PVC) - Bestimmung der Festigkeit verschweißter
Ecken und T-Verbindungen

This European Standard was approved by CEN on 7 April 2025.

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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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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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European foreword

This document (EN 514:2025) has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by SIS.

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 November 2025, and conflicting national standards shall be withdrawn at the latest by November 2025.

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 514:2018.

EN 514:2025 includes the following significant technical changes with respect to EN 514:2018:

- term 3.1 "failure load" has been revised;
- in 5.1 the measuring range of load for the tensile or compression testing machine has been expanded.

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 a tensile bending method and a compression bending method for determining the failure stress of welded corners and welded T-joints made from unplasticized poly(vinyl chloride) (PVC-U) profiles.

It is applicable to PVC based profiles used for the fabrication of windows and doors.

2 Normative references

There are no normative references in this document.

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 failure load

load at which the test specimen breaks corresponding with the maximum load during test

4 Principle

Welded corners or T-joints made from PVC-U profiles are subjected to a tensile bending or compression bending test at specified temperature and test speed.

The failure load is recorded and the failure stress is calculated.

5 Apparatus

5.1 Tensile or compression testing machine

Tensile or compression testing machines are used with the following specifications:

- a) measuring range of load: 0,2 kN to 20 kN;
- b) load indication with zero point setting and peak recording;
- c) measurement accuracy: $\pm 3\%$;
- d) test speed: (50 ± 5) mm/min.

5.2 Test setup

5.2.1 Tensile bending test with a welded corner as test specimen (see Figure 1).