

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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EUROPEAN STANDARD

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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 angle 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 6 December 2017.

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

Contents	Page
European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	4
4 Principle	4
5 Apparatus.....	4
5.1 Tensile or compression testing machine.....	4
5.2 Test arrangements.....	4
6 Test specimen.....	8
6.1 Welding of the corner test specimen	8
6.2 Welding of the T-joint test specimen	8
6.3 Tensile bending test specimen.....	9
6.4 Compression bending test specimen	9
6.5 Number of test specimens.....	9
7 Conditioning.....	10
8 Procedure.....	10
8.1 Test temperature	10
8.2 Tensile bending test.....	10
8.3 Compression bending test	10
9 Test report.....	10
Annex A (normative) Method for the calculation of the failure stress.....	12
A.1 Tensile bending test.....	12
A.2 Compression bending test	12

European foreword

This document (EN 514:2018) has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by NBN.

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of an identical text or by endorsement, at the latest by July 2018, and conflicting national standards shall be withdrawn at the latest by July 2018.

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1 Scope

This European Standard 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 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

failure load

load at which yield occurs, or, if yield does not occur, load at which the test specimen breaks

4 Principle

Welded corners and T-joints made from unplasticized poly(vinyl chloride) (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: 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 arrangements

5.2.1 Corner weld samples for tensile bending test (see Figure 1)