

SLOVENSKI STANDARD

SIST EN 514:2018

01-april-2018

Nadomešča:
SIST EN 514:2001

Polimerni materiali - Profili na osnovi polivinilklorida (PVC) - Ugotavljanje trdnosti kotnih varov in varov T

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

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

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

Ta slovenski standard je istoveten z: **EN 514:2018**

ICS:

83.140.99	Drugi izdelki iz gume in polimernih materialov	Other rubber and plastics products
91.060.50	Vrata in okna	Doors and windows

SIST EN 514:2018 **en,fr,de**

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EUROPEAN STANDARD

EN 514

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2018

ICS 83.140.99

Supersedes EN 514:2000

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.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

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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
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 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN not be held responsible for identifying any or all such patent rights.

This document supersedes EN 514:2000.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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EN 514:2018 (E)

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

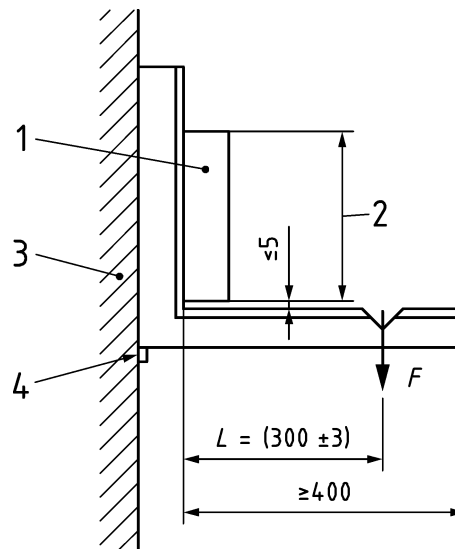
Tensile or compression testing machines are used with the following specifications:

- 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)

Dimensions in millimetres

**Key**

1 clamping device

2 rigid support over a minimum clamping length of 400 mm

3 frame

4 optional support block ($5 \pm 0,5$) mm L distance between the corner in the highest flange and the point of application of the load F load applied on the profileiTeh STANDARD PREVIEW
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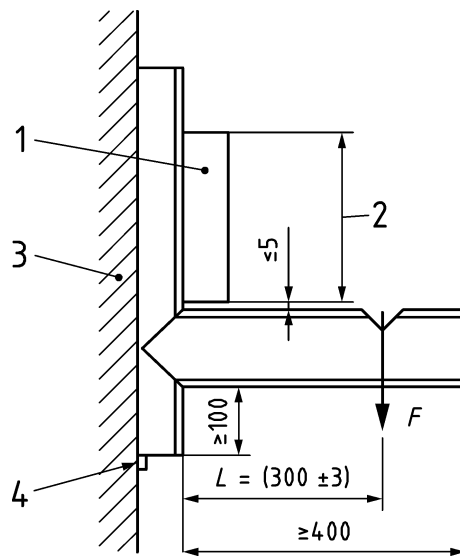
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<https://standards.iteh.ai/catalog/standards/sist/90ed7ea3-e330-4302-bb14->**Figure 1 — Example of a test rig for a tensile bending test of corners**

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5.2.2 T-joint weld samples for tensile bending test (see Figure 2)

Dimensions in millimetres

**Key**

1 clamping device

2 rigid support over a minimum clamping length of 400 mm

3 frame

4 optional support block ($5 \pm 0,5$) mm L distance between the corner in the highest flange and the point of application of the load F load applied on the profile

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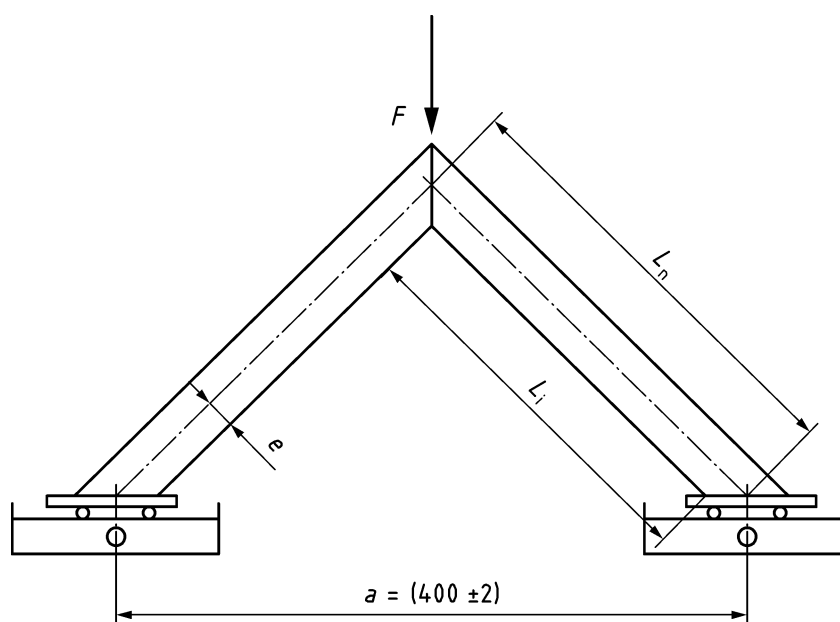
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Figure 2 — Example of a test rig for a tensile bending test of T-joints

5.2.3 Corner weld samples for compression bending test (see Figure 3)

Dimensions in millimetres



Key

L_i inside length of the legs

L_n length of the neutral axis of the profile

e distance between the inside of the section and the neutral axis

a distance between the axes of rotation of the carriages

F load applied on the corner

Figure 3 — Example of a test rig for compression bending test of corners joints