# SLOVENSKI STANDARD
# oSIST prEN 12814-1:2024

**01-november-2024**

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**Preskušanje zvarjenih spojev plastomernih polizdelkov - 1. del: Upogibni preskusi**

Testing of welded joints of thermoplastics semi-finished products - Part 1: Bend test

Prüfung von Schweißverbindungen aus thermoplastischen Kunststoffen - Teil 1: Biegeversuch

Essai des assemblages soudés sur produits semi-finis en thermoplastiques - Partie 1 : Essai de pliage



**Ta slovenski standard je istoveten z:** **prEN 12814-1**

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**ICS:**

| | | |
|---|---|---|
| 25.160.40 | Varjeni spoji in vari | Welded joints and welds |
| 83.080.01 | Polimerni materiali na splošno | Plastics in general |

**oSIST prEN 12814-1:2024** **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# DRAFT
# prEN 12814-1

August 2024

ICS 25.160.40

Will supersede EN 12814-1:1999

English Version

# Testing of welded joints of thermoplastics semi-finished products - Part 1: Bend test

Essai des assemblages soudés sur produits semi-finis en thermoplastiques - Partie 1 : Essais de pliage

Prüfen von Schweißverbindungen aus thermoplastischen Kunststoffen - Teil 1: Biegeversuch

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 249.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.



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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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# Contents

Page

## European foreword

This document (prEN 12814-1:2024) has been prepared by Committee CEN/TC 249 “Plastics”, the secretariat of which is held by SIS.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 12814-1:1999.

prEN 12814-1:2024 includes the following significant technical changes with respect to EN 12814-1:1999:

— in Table 4, PA-U has been added;

— in Clause 12 “Test report”, added requirement to define the initial, final, bend or the ram position and the bend angle or ram displacement.

# 1 Scope

This document specifies the dimensions and the method for sampling and preparing test specimens, together with the conditions for carrying out the bend test.

The result of the test is also influenced by the deformation behaviour of the tested material, the kind of welding process and the geometry of the sample.

The test is applicable to plate and tube butt jointed assemblies made from thermoplastic materials filled or unfilled, but not reinforced, irrespective of the welding process used. It is not applicable to assemblies with a wall thickness < 3 mm.

# 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 2768-1, *General tolerances — Part 10: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 2818, *Plastics — Preparation of test specimens by machining*

ISO 5893, *Rubber and plastics test equipment — Tensile, flexural and compression types (constant rate of traverse) — Specification*



# 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**
**face bend**
the face corresponding to the open side of the groove is subjected to extension

**3.2**
**root bend**
the face corresponding to the root of the weld is subjected to extension

**3.3**
**side bend**
one of the faces of the test specimen corresponding to the cross section of the weld is subjected to extension

**3.4**
**initial angle**
$\alpha_i$
angle between the two sides of the test specimen above the rollers before the test