

Testing of welded joints of thermoplastics
semi-finished products - Part 8: Requirements

This document is a preview generated by EVS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 12814-8:2021 sisaldab Euroopa standardi EN 12814-8:2021 ingliskeelset teksti.	This Estonian standard EVS-EN 12814-8:2021 consists of the English text of the European standard EN 12814-8:2021.
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 27.01.2021.	Date of Availability of the European standard is 27.01.2021.
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.

ICS 25.160.40

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele. Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis- ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis- ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

EUROPEAN STANDARD

EN 12814-8

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2021

ICS 25.160.40

Supersedes EN 12814-8:2001

English Version

Testing of welded joints of thermoplastics semi-finished products - Part 8: Requirements

Essais des assemblages soudés sur produits semi-finis
en thermoplastiques - Partie 8 : Exigences

Prüfen von Schweißverbindungen aus
thermoplastischen Kunststoffen - Teil 8:
Anforderungen

This European Standard was approved by CEN on 20 December 2020.

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.

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.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

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, definitions, symbols and abbreviations	4
3.1 Terms and definitions	4
3.2 Symbols and abbreviations	4
4 Materials and properties	5
5 Destructive test methods	5
6 Requirements	5
6.1 General	5
6.2 Bend test	5
6.3 Tensile test	15
6.4 Tensile creep test	16
6.5 Peel tests	16
6.6 Macroscopic examination	16
6.7 Low temperature tensile test	16
6.8 Tensile test with waisted test specimen	17

European foreword

This document (EN 12814-8:2021) 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 2021, and conflicting national standards shall be withdrawn at the latest by July 2021.

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 12814-8:2001.

In comparison with the previous edition, the following technical modifications have been made:

- PVC-RI has been removed because it is no longer used in the designation;
- bend angle data for PVC-NI has been replaced by PVC-U;
- ram displacement requirements for PP-B and PP-H have been added;
- minimum short-term tensile welding factor for extrusion welding PVC-U has been added.

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

1 Scope

This document provides the requirements for the tests made on welded thermoplastics semi-finished products.

The selection of the appropriate test method(s) is made in accordance with the particular type and application of welded product.

The test results depend on the conditions of manufacture for the test specimen and on the test conditions. They can therefore only be related to the behaviour of the product or can only be used for designing a structure, if the test conditions can be related to the service conditions.

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 12814-1, *Testing of welded joints of thermoplastics semi-finished products - Part 1: Bend test*

EN 12814-2, *Testing of welded joints of thermoplastics semi-finished products - Part 2: Tensile test*

EN 12814-3, *Testing of welded joints in thermoplastics semi-finished products - Part 3: Tensile creep test*

EN 12814-4, *Testing of welded joints of thermoplastics semi-finished products - Part 4: Peel test*

EN 12814-5, *Testing of welded joints of thermoplastics semi-finished products - Part 5: Macroscopic examination*

EN 12814-6, *Testing of welded joints of thermoplastics semi-finished products - Part 6: Low temperature tensile test*

EN 12814-7, *Testing of welded joints of thermoplastics semi-finished products - Part 7: Tensile test with waisted test specimens*

3 Terms, definitions, symbols and abbreviations

3.1 Terms and definitions

No terms and definitions are listed in this document.

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 <https://www.iso.org/obp>

3.2 Symbols and abbreviations

For the purposes of this document, the following symbols and abbreviations apply.

HT Heated tool welding

HG Hot gas welding

EX Extrusion welding (continuous)