

Testing of welded joints of thermoplastics semi-finished products - Part 4: Peel test

Testing of welded joints of thermoplastics semi-finished products - Part 4: Peel test

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 12814-4:2002 sisaldab Euroopa standardi EN 12814-4:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.03.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 12814-4:2002 consists of the English text of the European standard EN 12814-4:2001.</p> <p>This document is endorsed on 14.03.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
--	---

<p>Käsitlusala:</p> <p>This standard specifies the dimensions, the method of sampling, the preparation of the test specimens, and also the conditions for performing the peel test perpendicular to the weld in order to determine the peel resistance and failure behaviour.</p>	<p>Scope:</p> <p>This standard specifies the dimensions, the method of sampling, the preparation of the test specimens, and also the conditions for performing the peel test perpendicular to the weld in order to determine the peel resistance and failure behaviour.</p>
--	--

ICS 25.160.40

Võtmesõnad: definitions, dimensions, peeling tests, plastics, sampling methods, semi-finished products, specimen preparation, testing, thermoplastic polymers, welded joints, welding

ICS 25.160.40

English version

Testing of welded joints of thermoplastics semi-finished products - Part 4: Peel test

Essai des assemblages soudés sur produits semi-finis en
thermoplastiques - Partie 4: Essai de pelage

Prüfen von Schweißverbindungen aus thermoplastischen
Kunststoffen - Teil 4: Schälversuch

This European Standard was approved by CEN on 16 August 2001.

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 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

	page
Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions.....	4
4 Symbols and designations	5
5 Peel test methods	5
6 T-peel test	5
6.1 Principle of the test.....	5
6.2 Sampling procedures	5
6.3 Dimensions of test specimens	6
6.4 Cutting of test specimens	7
6.5 Mechanical testing.....	7
6.6 Test equipment	8
6.7 Determination of the peel resistance.....	8
7 Decohesion test	9
7.1 Principle of the test.....	9
7.2 Sampling procedure	9
7.3 Conditioning.....	9
7.4 Preparation of test specimens.....	9
7.5 Test equipment	12
7.6 Mechanical testing.....	12
7.7 Calculation of joint toughness	12
8 Crush test	12
8.1 Principle of the test.....	12
8.2 Sampling procedure	13
8.3 Conditioning.....	14
8.4 Test equipment	14
8.5 Mechanical testing.....	14
9 Test report	15

Foreword

This European Standard has been prepared by Technical Committee CEN/TC 249 "Plastics", the secretariat of which is held by IBN.

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 March 2002, and conflicting national standards shall be withdrawn at the latest by March 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

1 Scope

This standard specifies the dimensions, the method of sampling, the preparation of the test specimens, and also the conditions for performing the peel test perpendicular to the weld in order to determine the peel resistance and the failure behaviour.

A peel test may be used in conjunction with other tests (e.g. tensile creep, macro...) to assess the performance of welded assemblies, made from thermoplastics materials.

Peel tests are applicable to overlap welded assemblies made from thermoplastics materials, irrespective of the welding process used.

2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to, or revisions of, any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

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

EN 13100-1, *Non destructive testing of welded joints of thermoplastics semi-finished products — Part 1: Visual examination.*

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

ISO 13954, *Plastics pipes and fittings — Peel decohesion test for polyethylene (PE) electrofusion assemblies of nominal outside diameter greater than or equal to 90 mm.*

3 Terms and definitions

For the purposes of this European standard, the following term and definition apply.

3.1

peel resistance, f

the arithmetic mean of the force values divided by the width of the test specimen (only relevant for T-peel test)