



NSAI
Standards

Irish Standard
I.S. EN ISO 3501:2015

Plastics piping systems - Mechanical joints between fittings and pressure pipes - Test method for resistance to pull-out under constant longitudinal force (ISO 3501:2015)

I.S. EN ISO 3501:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

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I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

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This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

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EN ISO 3501

NORME EUROPÉENNE

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Supersedes EN 712:1993

English Version

Plastics piping systems - Mechanical joints between fittings and pressure pipes - Test method for resistance to pull-out under constant longitudinal force (ISO 3501:2015)

Systèmes de canalisations en plastique - Assemblages mécaniques entre raccords et tubes sous pression - Méthode d'essai de résistance à l'arrachement sous une force longitudinale constante (ISO 3501:2015)

Kunststoff-Rohrleitungssysteme - Mechanische Verbindungen zwischen Fittings und Druckrohren - Prüfverfahren für den Widerstand gegen Zugbelastung bei konstanter Zugkraft (Ausreißprüfung) (ISO 3501:2015)

This European Standard was approved by CEN on 7 February 2015.

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EN ISO 3501:2015 (E)

Contents

Page

| | |
|----------------------|----------|
| Foreword..... | 3 |
|----------------------|----------|

Foreword

This document (EN ISO 3501:2015) has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" in collaboration with Technical Committee CEN/TC 155 "Plastics piping systems and ducting systems" the secretariat of which is held by NEN.

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of an identical text or by endorsement, at the latest by September 2015, and conflicting national standards shall be withdrawn at the latest by September 2015.

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

This document supersedes EN 712:1993.

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Endorsement notice

The text of ISO 3501:2015 has been approved by CEN as EN ISO 3501:2015 without any modification.

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INTERNATIONAL STANDARD

**ISO
3501**

Second edition
2015-03-01

Plastics piping systems — Mechanical joints between fittings and pressure pipes — Test method for resistance to pull-out under constant longitudinal force

Systèmes de canalisations en plastique — Assemblages mécaniques entre raccords et tubes sous pression — Méthode d'essai de résistance à l'arrachement sous une force longitudinale constante



Reference number
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Contents

Page

| | |
|--|-----------|
| Foreword | iv |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Principle | 1 |
| 4 Test parameters and requirements | 1 |
| 5 Apparatus | 2 |
| 6 Test pieces | 2 |
| 7 Procedure | 3 |
| 8 Test report | 3 |
| Annex A (normative) Test parameters | 4 |

ISO 3501:2015(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: [Foreword — Supplementary information](#).

The committee responsible for this document is ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 5, *General properties of pipes, fittings and valves of plastic materials and their accessories — Test methods and basic specifications*.

This second edition cancels and replaces the first edition (ISO 3501:1976), which has been technically revised. The reason for modification is for applicability to other plastics materials, other sizes and/or other test conditions and alignment with texts of other standards on test methods. This edition of ISO 3501 is prepared under the Vienna Agreement, so that the content is also aligned with EN 712:1994, which will be replaced.

The modifications are:

- no material is mentioned;
- test parameters are omitted, although the original test parameters can be found in [Annex A](#);
- the diameter limit is removed;
- no requirements are given;
- editorial changes have been introduced.

Plastics piping systems — Mechanical joints between fittings and pressure pipes — Test method for resistance to pull-out under constant longitudinal force

WARNING — Persons using this document should be familiar with normal laboratory practice, if applicable. The use of this International Standard can involve hazardous materials, operations, and equipment. This International Standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this International Standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.

1 Scope

This International Standard specifies a method for checking the ability of assembled uniaxial joints between fittings and plastic pressure pipes to withstand longitudinal tensile stresses. The test applies regardless of the design and material of the fitting used for jointing plastics pipe.

This test method is not applicable to fusion-welded joints.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3126, *Plastics piping systems — Plastics components — Determination of dimensions*

ISO 17456:2006, *Plastics piping systems — Multilayer pipes — Determination of long-term strength*

3 Principle

An assembled joint is subjected to a longitudinal tensile force calculated as a function of the pipe dimensions and the maximum permissible induced hoop stress of the relevant pipe.

4 Test parameters and requirements

The test parameters of the standard which refers to this International Standard shall be used and the requirements shall be fulfilled. If one or more parameters are not given in the referring International Standard, the ones given in [Annex A](#) shall apply.

The following test parameters should be given by the standard which refers to this International Standard:

- a) pull-out force (N);
- b) test duration (h);
- c) test temperature (°C);
- d) free length (mm).

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