



NSAI
Standards

Irish Standard
I.S. EN ISO 1452-5:2010

Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure -
Unplasticized poly(vinyl chloride) (PVC-U)
- Part 5: Fitness for purpose of the system
(ISO 1452-5:2009, corrected version 2010-03-01)

I.S. EN ISO 1452-5:2010

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

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

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<p><i>This document replaces:</i> EN 1452-5:1999</p>	<p><i>This document is based on:</i> EN ISO 1452-5:2010 EN 1452-5:1999</p>	<p><i>Published:</i> 6 October, 2010 23 June, 1999</p>			
<p>This document was published under the authority of the NSAI and comes into effect on: 21 October, 2010</p>		<p>ICS number: 93.025 91.140.60 23.040.20 23.040.45</p>			
<table> <tr> <td data-bbox="228 1738 555 1861"> <p>NSAI 1 Swift Square, Northwood, Santry Dublin 9</p> </td> <td data-bbox="571 1767 826 1890"> <p>T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie</p> </td> <td data-bbox="900 1738 1129 1861"> <p>Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie</p> </td> </tr> </table>			<p>NSAI 1 Swift Square, Northwood, Santry Dublin 9</p>	<p>T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie</p>	<p>Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie</p>
<p>NSAI 1 Swift Square, Northwood, Santry Dublin 9</p>	<p>T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie</p>	<p>Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie</p>			
<p>Údarás um Chaighdeáin Náisiúnta na hÉireann</p>					

English Version

Plastics piping systems for water supply and for buried and
above-ground drainage and sewerage under pressure -
Unplasticized poly(vinyl chloride) (PVC-U) - Part 5: Fitness for
purpose of the system (ISO 1452-5:2009, corrected version
2010-03-01)

Systèmes de canalisations en plastique pour l'alimentation
en eau, pour branchements et collecteurs d'assainissement
enterrés et aériens avec pression - Poly(chlorure de vinyle)
non plastifié (PVC-U) - Partie 5: Aptitude à l'emploi du
système (ISO 1452-5:2009, version corrigée 2010-03-01)

Kunststoff-Rohrleitungssysteme für die Wasserversorgung
und für erdverlegte und nicht erdverlegte Entwässerungs-
und Abwasserdruckleitungen - Weichmacherfreies
Polyvinylchlorid (PVC-U) - Teil 5: Gebrauchstauglichkeit
des Systems (ISO 1452-5:2009, korrigierte Fassung 2010-
03-01)

This European Standard was approved by CEN on 23 September 2010.

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 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 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



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

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

Foreword.....3

Foreword

The text of ISO 1452-5:2009, corrected version 2010-03-01 has been prepared by Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 1452-5:2010 by 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 April 2011, and conflicting national standards shall be withdrawn at the latest by April 2011.

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 ISO 1452-5:2009.

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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Endorsement notice

The text of ISO 1452-5:2009, corrected version 2010-03-01 has been approved by CEN as a EN ISO 1452-5:2010 without any modification.

This page is intentionally left BLANK.

I.S. EN ISO 1452-5:2010
**INTERNATIONAL
STANDARD**

**ISO
1452-5**

First edition
2009-12-01

**Plastics piping systems for water supply
and for buried and above-ground
drainage and sewerage under pressure —
Unplasticized poly(vinyl chloride)
(PVC-U) —**

**Part 5:
Fitness for purpose of the system**

*Systèmes de canalisations en plastique pour l'alimentation en eau, pour
branchements et collecteurs d'assainissement enterrés et aériens avec
pression — Poly(chlorure de vinyle) non plastifié (PVC-U) —*

Partie 5: Aptitude à l'emploi du système



Reference number
ISO 1452-5:2009(E)

© ISO 2009

PDF disclaimer

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.



COPYRIGHT PROTECTED DOCUMENT

© ISO 2009

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

Published in Switzerland

Contents

Page

Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions, symbols and abbreviations	2
4 Fitness for purpose of joints and the system	2
4.1 Assemblies with non-end-load-bearing joints	2
4.2 Assemblies with end-load-bearing joints	3
4.3 Short-term pressure test for leaktightness of assemblies	3
4.4 Short-term negative pressure test for leaktightness of assemblies	4
4.5 Long-term pressure test for leaktightness of assemblies	5
Annex A (normative) Assemblies of imperial (inch)-sized pipes, fittings, valves and ancillaries	7
Annex B (informative) Determination of the long-term test pressure by creep consideration	9
Bibliography	13

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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 1452-5 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 155, *Plastics piping systems and ducting systems*, in collaboration with ISO Technical Committee ISO/TC 138, *Plastics pipes, fittings and valves for the transport of fluids*, Subcommittee SC 2, *Plastics pipes and fittings for water supplies*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This first edition cancels and replaces ISO 4422-5:1997, which has been technically revised.

ISO 1452 consists of the following parts, under the general title *Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure — Unplasticized poly(vinyl chloride) (PVC-U)*:

- *Part 1: General*
- *Part 2: Pipes*
- *Part 3: Fittings*
- *Part 4: Valves*
- *Part 5: Fitness for purpose of the system*

Guidance for the assessment of conformity is to form the subject of a part 7.

Introduction

The System Standard, of which this is Part 5, specifies the requirements for a piping system and its components made from unplasticized poly(vinyl chloride) (PVC-U). The piping system is intended to be used for water supply and for buried and above-ground drainage and sewerage under pressure.

In respect of potential adverse effects on the quality of water intended for human consumption, caused by the products covered by this part of ISO 1452, the following are relevant.

- a) This part of ISO 1452 provides no information as to whether the products may be used without restriction;
- b) Existing national regulations concerning the use and/or the characteristics of these products remain in force.

Requirements and test methods for components requirements and test methods are specified in ISO 1452-2, ISO 1452-3 and ISO 1452-4.

This part of ISO 1452 establishes the characteristics of fitness for purpose of the plastics piping system composed of pipes, fittings, valves, ancillaries and their joints.

Guidance for installation is given in ISO/TR 4191^[1].

Guidance for assessment of conformity is provided in ENV 1452-7^[2].

I.S. EN ISO 1452-5:2010

Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure — Unplasticized poly(vinyl chloride) (PVC-U) —

Part 5: Fitness for purpose of the system

1 Scope

This part of ISO 1452 specifies the characteristics for the fitness for purpose of unplasticized poly(vinyl chloride) (PVC-U) piping systems intended for water supply and for buried and above-ground drainage and sewerage under pressure.

It also specifies the test parameters for the test methods referred to in this part of ISO 1452.

In conjunction with ISO 1452-1, ISO 1452-2, ISO 1452-3 and ISO 1452-4, it is applicable to joints and assemblies with components of PVC-U, other plastics and non-plastics materials intended to be used for the following:

- a) water mains and services buried in ground;
- b) conveyance of water above ground for both outside and inside buildings;
- c) buried and above-ground drainage and sewerage under pressure;

It is applicable to piping systems intended for the supply of water under pressure up to and including 25 °C (cold water) intended for human consumption and for general purposes as well as for waste water under pressure.

This part of ISO 1452 is also applicable to components for the conveyance of water and waste water up to and including 45 °C. For temperatures between 25 °C and 45 °C, Figure A.1 of ISO 1452-2:2009 applies.

NOTE The producer and the end-user can come to agreement on the possibilities of use for temperatures above 45 °C on a case-by-case basis.

2 Normative references

The following referenced documents are indispensable for the application 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 1452-1, *Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure — Unplasticized poly(vinyl chloride) (PVC-U) — Part 1: General*

ISO 1452-2:2009, *Plastics piping systems for water supply and for buried and above-ground drainage and sewerage under pressure — Unplasticized poly(vinyl chloride) (PVC-U) — Part 2: Pipes*

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-