BRITISH STANDARD

BS EN ISO 1452-5:2009

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

Part 5: Fitness for purpose of the system (ISO 1452-5:2009)

ICS 23.040.20; 23.040.45; 91.140.60; 93.025

NO COPYING WITHOUT BSI PERMISSION EXCEPT AS PERMITTED BY COPYRIGHT LAW

British Standards

Full document details: BS EN ISO 1452-5:2009

National foreword

This British Standard is the UK implementation of EN ISO 1452-5:2009. Together with BS EN ISO 1452-1:2009, BS EN ISO 1452-2:2009, BS EN ISO 1452-3:2009 and BS EN ISO 1452-4:2009, it supersedes BS EN 1452-5:1999 and BS EN 1456-1:2001 which are withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/88/2, Plastics piping for pressure applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 January 2010

© BSI 2010

ISBN 978 0 580 59546 2

Amendments/corrigenda issued since publication

Date	Comments

Documents
Document Sharing Hub

Full document details: BS EN ISO 1452-5:2009

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 1452-5

December 2009

ICS 93.025; 91.140.60; 23.040.20; 23.040.45

Supersedes EN 1452-5:1999, EN 1456-1:2001

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)

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)

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)

This European Standard was approved by CEN on 4 November 2009.

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, 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

© 2009 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN ISO 1452-5:2009: E

Documents
Document Sharing Hub

Full document details: BS EN ISO 1452-5:2009

Foreword

This document (EN ISO 1452-5:2009) has been prepared by Technical Committee CEN/TC 155 “Plastics piping systems and ducting systems", the secretariat of which is held by NEN, in collaboration with Technical Committee ISO/TC 138 "Plastics pipes, fittings and valves for the transport of fluids".

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 June 2010, and conflicting national standards shall be withdrawn at the latest by June 2010.

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 1452-5:1999, EN 1456-1:2001.

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, 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.

Documents
Document Sharing Hub

Full document details: BS EN ISO 1452-5:2009

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

© ISO 2009 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 1452-5:2009

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.

© ISO 2009 – All rights reserved
Documents
Document Sharing Hub
Full document details: BS EN ISO 1452-5:2009

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].

© ISO 2009 – All rights reserved

Documents
Document Sharing Hub
Full document details: BS EN ISO 1452-5:2009