

Plastics piping systems for water supply — Unplasticized poly (vinyl chloride) (PVC-U) —

Part 1: General

ICS 23.040.01; 91.140.60

National foreword

This British Standard is the UK implementation of EN 1452-1:1999. Collectively, Parts 1, 2, 3, 4 and 5 of BS EN 1452 supersede BS 3505:1986, BS 4346-1:1969 and BS 4346-2:1970. Since those British Standards are the basis of piping systems with a design life of at least 50 years, it is intended that they will be declared obsolescent, by 26 June 2001. With BS EN 14814:2007, collectively Parts 1 to 5 of BS EN 1452 also partially supersede BS 4346-3:1982, which is withdrawn to exclude requirements for joints for pressure pipes for water supply.

NOTE 1 The UK Water Industry has indicated that this British Standard is to be regarded as superseding the following Water Industry Specifications:

WIS 4-31-06, Issue 2: March 1994 *Blue unplasticised PVC pressure pipes, integral joints and post-formed bends for cold potable water (underground use)*

WIS 4-31-07, Issue 2: March 1994 *Unplasticised PVC pressure fittings and assemblies for cold potable water (underground use)*

The UK participation in its preparation was entrusted by Technical Committee PRI/61, Plastics piping systems and components, to Subcommittee PRI/61/2, Thermoplastics piping systems and components for pressure applications.

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

The responsible UK committee gives the following advice concerning the selection and installation of piping systems and components conforming to this British Standard.

- a) Water supply companies and other entities are obliged to use Parts 1 to 5 of this suite of European Standards, produced under EC/U mandate, if they wish to purchase PVC-U pipe systems or components within its scope.

NOTE 2 Parts 6 and 7 have each been prepared as an ENV (pre-standard), to allow further development, and their use is voluntary unless invoked contractually.

- b) Where there are options, care should be taken to ensure that agreement is established between suppliers and purchasers, e.g. in terms of colour, size, physical characteristics, effect on water quality, quality assurance.

For colour in particular, it has been the practice of UK water companies to use blue metric PVC-U pipes (conforming to WIS 4-31-06), to facilitate identification of potable water pipelines. For buried applications in the United Kingdom, attention is drawn to the recommendations of the National Joint Utilities Group (NJUG) concerning the colour coding of pipelines and other services. For UK public water supply applications, the pipes should also be marked with the word "WATER".

This British Standard was published under the authority of the Standards Committee and comes into effect on 15 May 2000

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Amendments/corrigenda issued since publication

Amd. No.	Date	Comments
11007 Corrigendum No. 1	July 2000	Indicated by a sideline
12004 Corrigendum No. 2	October 2000	Correction to National foreword supersession details
	31 August 2009	Correction to National foreword supersession details, and alignment of BSI and CEN publication dates

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c) To guard against leakage or contamination as a result of biodegradation of elastomeric sealing rings or gaskets used in piping systems, it has been UK practice to specify a test for this. Elastomeric seals appropriate for the cold water applications should be specified to conform to type WA in BS EN 681-1:1996. However, the requirement for resistance to biodegradation is specifically excluded from the scope of that standard. BS 7874 specifies an appropriate test; attention is drawn to its foreword for guidance on requirements.

d) Attention is drawn to the formula in 3.1.4.4, which is considered to have potentially dangerous implications as presented, without units. To reflect use in the relevant Directives and operating procedures, the preferred UK equivalent is:

$$\sigma = \frac{p(d_{em} - e)}{20e}$$

where:

σ is in megapascals (MPa)

p is in bar

d_{em} and e are in millimetres (mm).

WARNING This British Standard, which is identical with EN 1452-1:1999, does not necessarily detail all the precautions necessary to meet the requirements of the Health and Safety at work etc. Act 1974 and subsequent regulations. Attention should be paid to any appropriate safety precautions and the test methods should be performed only by trained personnel.

Regulation 25 of the Water Supply (Water Quality) Regulations 1989 specified the circumstances in which water undertakers may use products in contact with public water supplies in England and Wales. All pipes used to convey public water supplies must be approved under the provisions of regulation 25(1)(a) in order to ensure that use will not cause adverse effect on water quality or risk to health of consumers. Similar provisions apply in Scotland and Northern Ireland.

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.

English version

Plastics piping systems for water supply – Unplasticized poly(vinyl chloride) (PVC-U) – Part 1: General

Systèmes de canalisations en plastique pour alimentation
en eau – Poly(chlorure de vinyle) non plastifié (PVC-U) –
Partie 1: Généralités

Kunststoff-Rohrleitungssysteme für die Wasserversorgung
– Weichmacherfreies Polyvinylchlorid (PVC-U) – Teil 1:
Allgemeines

This European Standard was approved by CEN on 2 July 1998.

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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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