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**BSI Standards Publication**

# **Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure — Unplasticized poly(vinyl chloride) (PVC-U)**

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Part 1: Specifications for pipes, fittings and the system

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## National foreword

This British Standard is the UK implementation of EN 1329-1:2020. It supersedes BS EN 1329-1:2014+A1:2018, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee PRI/88/1, Plastics piping for non-pressure applications.

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

The UK committee advises users that this standard is complemented by BS 4514:2001 and that, except for those with nominal size DN/OD 82, products conforming to this standard are generally compatible with products of the same size that are manufactured in accordance with the requirements of BS 4514:2001.

NOTE: Nominal sizes DN/OD 36, 43 and 56 in this standard correspond exactly with the 1¼/32, 1½/40 and 2/50 nominal sizes specified in BS 5255:1989. BS 5255:1989 was withdrawn on 6 June 2019; however, at the time of publication of this standard, the UK committee is aware that there are still products manufactured to the requirements of BS 5255:1989 in the UK, in order to provide continuity with existing pipework.

In the case of nominal size DN/OD 82 as specified in this standard, the minimum mean outside diameter is 82.0 mm. Existing installed piping systems conforming to BS 4514:2001 are based on pipes of nominal size 82 having a minimum mean outside diameter of 82.4 mm. The UK committee advises users not to regard products manufactured to these two sizes as mutually compatible, unless the manufacturer specifically declares otherwise and/or connections between zones of differing pipework are clear and made using appropriate adapters or seals.

The UK committee also gives the following advice and recommendations concerning the specification of piping components that are used with systems that conform to this standard, but which are not detailed in it:

1. BS 4514:2001 specifies requirements for pipes, fittings and other sizes of accessories not covered by this standard, including pipes of 82.4 mm minimum mean outside diameter, the minimum clear opening size dimensions of access fittings, design dimensions of swept fittings, stand-off distances of fittings and clips used to fasten pipes to a wall, and connectors for WC pans.
2. As this standard does not cover threaded components, if a PVC-U fitting is intended to adapt to a threaded metal component then the thread form should conform to either BS EN 10226-1 or BS EN ISO 228-1.
3. Although this standard expands on its specifications for the geometrical characteristic requirements of swept angle bend and branch fittings by cross-referring users to ISO 265-1 (see subclause 7.5), in the UK all such products must also conform to the requirements of national regulations. Further guidance is given in subclause 5.3.7 of BS 4514:2001.
4. As this standard is specific to internal piping system installations and so it does not cover requirements for external installations, which are commonplace and remain allowed in the UK, pipes and fittings intended for outdoor use should conform to the weather resistance requirement specified in subclause 3.2 of BS 4514:2001.

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Finally, the UK committee gives the following advice regarding the selection and installation of piping components and systems conforming to this standard:

1. This standard adds new subclause 6.4 "Reaction to fire", which Technical Committee CEN/TC 155 is adding to all product standards for soil and waste applications. National regulations continue to apply in the UK and should always be consulted.
2. Products should only be used in application area B, using type M or type L sockets as specified in this standard, and installed in accordance with BS EN 12056-2:2000 and its national annexes.
3. For underground installations, the UK committee recommends that users also consult BS EN 1401-1:2019 when applying this standard, and take account of current national installation practices, e.g. see BS EN 1610 and National Annex NA in BS EN 752:2017.

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### **Amendments/corrigenda issued since publication**

Date	Text affected
30 April 2021	Correction to text of national foreword

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English Version

## Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure - Unplasticized poly(vinyl chloride) (PVC-U) - Part 1: Specifications for pipes, fittings and the system

Systèmes de canalisations en plastique pour l'évacuation des eaux-vannes et des eaux usées (à basse et à haute température) à l'intérieur de la structure des bâtiments - Poly(chlorure de vinyle) non plastifié (PVC-U) - Partie 1 : Spécifications pour tubes, raccords et le système

Kunststoff-Rohrleitungssysteme zum Ableiten von Abwasser (niedriger und hoher Temperatur) innerhalb der Gebäudestruktur - Weichmacherfreies Polyvinylchlorid (PVC-U) - Teil 1: Anforderungen an Rohre, Formstücke und das Rohrleitungssystem

This European Standard was approved by CEN on 2 November 2020.

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-CENELEC 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-CENELEC Management Centre has the same status as the official versions.

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN 1329-1:2020) has been prepared 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 June 2021, and conflicting national standards shall be withdrawn at the latest by June 2021.

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

This document supersedes EN 1329-1:2014+A1:2018.

The main changes compared to the previous version EN 1329-1:2014+A1:2018:

- review of non-virgin material use and alignment with recently revised EN 1401-1;
- addition of subclause 6.4 Reaction to fire;
- updating in accordance with the latest template;
- updating of normative references.

EN 1329 consists of the following parts, under the general title *Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure — Unplasticized poly(vinyl chloride) (PVC-U)* :

- *Part 1: Specifications for pipes, fittings and the system;*
- *Part 2: Guidance for the assessment of conformity (technical specification).*

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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## 1 Scope

This document specifies the requirements for solid wall pipes with smooth internal and external surfaces, extruded from the same formulation throughout the wall, fittings and the system of unplasticized poly(vinyl chloride) (PVC-U) piping systems intended for soil and waste discharge applications (low and high temperature):

- inside buildings (application area code "B");
- for both inside buildings and buried in ground within the building structure (application area code "BD").

NOTE 1 The intended use is reflected in the marking of products by "B" or "BD".

NOTE 2 Application "B" covers uses above ground inside the building, or outside buildings fixed onto the wall.

NOTE 3 Multilayer pipes with different formulations throughout the wall and foamed core pipes are covered by EN 1453-1 [1].

NOTE 4 For use buried in ground within the building structure are intended only those components (marked with "BD") with nominal outside diameters equal to or greater than 75 mm.

NOTE 5 EN 476 [2] specifies the general requirements for components used in discharge pipes, drains and sewers for gravity systems. Pipes and fittings conforming to this standard fully meet these requirements.

This document is also applicable to PVC-U pipes, fittings and the system intended for the following purposes:

- ventilating part of the pipework in association with discharge applications;
- rainwater pipework within the building structure.

This document also specifies the test parameters for the test methods that are referred to.

This document covers a range of nominal sizes, a range of pipes and fittings series and gives recommendations concerning colours.

NOTE 6 It is the responsibility of the purchaser or specifier to make the appropriate selections from these aspects, taking into account their particular requirements and any relevant national regulations and installation practices or codes.

NOTE 7 Pipes, fittings and other components conforming to any of the plastics product standards listed in Annex B can be used with pipes and fittings conforming to this document, provided they conform to the requirements for joint dimensions given in Clause 7 and to the requirements of Table 26.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

EN 681-1, *Elastomeric seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 1: Vulcanized rubber*

EN 681-2, *Elastomeric Seals — Materials requirements for pipe joint seals used in water and drainage applications — Part 2: Thermoplastic elastomers*