

Plastics piping systems for soil and waste discharge (low and high temperature) within the building structure — Polypropylene (PP) —

Part 1: Specifications for pipes, fittings and the system

The European Standard EN 1451-1:1998 has the status of a
British Standard

ICS 23.040.01; 83.140.30; 91.140.80

National foreword

This British Standard is the official English language version of EN 1451-1:1998. It supersedes BS 5254:1976 and, because the size range in EN 1451-1 also covers sizes used for waste pipes and fittings, it is one of a group of EN standards which each partially supersedes BS 5255:1989. Both BS 5254:1976 and BS 5255:1989 will be declared obsolescent with effect from 30 June 2001.

NOTE When first available, the ratified text of EN 1451-1:1998 gave a date of withdrawal for conflicting national standards of "June 1999", but this was subsequently changed by resolution CEN/CS 006/1999 to 2001-06-30. In the UK this date is being applied to coordinate the change-over to European Standards for plastics piping systems for this application and any consequent revision, declaration of obsolescence or withdrawal of the corresponding British Standards which are being superseded.

Products conforming to BS EN 1451-1 will be compatible with those of the same size in accordance with BS 5254:1976. The nominal sizes DN/OD 34, 41 and 54 correspond exactly with the 1 $\frac{1}{4}$, 1 $\frac{1}{2}$ and 2 sizes respectively in BS 5254:1976.

Since EN 1451-1:1998 does not cover all the piping components covered by or used in conjunction with products conforming to BS 5254 and/or BS 5255, see BS 4514:1983 and its planned revision for the UK requirements for the minimum opening dimensions of access fittings, design of swept fittings, for connectors to WC pans and stand-off dimensions of pipe and fitting clips.

The UK participation in its preparation was entrusted by Technical Committee PRI/61, Plastics piping systems and components, to Subcommittee PRI/61/1, Thermoplastics piping systems and components for non-pressure applications, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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 of alternative test conditions provided in this standard.

a) Table 13, as referred to in 8.1, appears to present two alternative test conditions, i.e. method A or method B of EN 743:1994, without identifying where they apply or which is the reference method in case of dispute. Since these alternative test conditions might lead to conflicting results, users of this standard should declare or agree on a contractual basis which condition is to be the reference condition in case of dispute.

b) In Table 17, reference is made to a specific point of detail in the current edition of EN 921, i.e. "types a or b" end caps, and therefore:

- 1) the reference should be construed as relating to the current (1995) edition, as though the reference in Table 17 and hence also in clause 2 were dated accordingly;
- 2) since alternative test conditions are permitted which might lead to conflicting results, depending on the choice of end caps, users of this standard should declare or agree on a contractual basis which condition is to be the reference condition in case of dispute.

The responsible UK committee gives the following advice concerning the specification of piping components used with piping systems conforming to this British Standard but not detailed in EN 1451-1:1998.

This British Standard, having been prepared under the direction of the Sector Committee for Materials and Chemicals, was published under the authority of the Standards Committee on 15 February 2000

Amendments issued since publication

Amd. No.	Date	Comments
13819 Corrigendum No. 1	21 November 2002	Revision of national foreword

© BSI 21 November 2002

ISBN 0 580 35938 7

c) See BS 4514:2001 for the UK requirements for the minimum opening dimensions of access fittings, design of swept fittings, connectors to WC pans, stand-off dimensions of pipe and fitting brackets and requirements for adaptors and plugs. Reference should also be made to the following design requirements of BS 4514:2001, **5.3.1, 5.3.3, 5.3.5, 5.3.7, 5.3.8, 5.3.9**, and Figures 6, 8 and 9.

Analogous provisions apply in Scotland and Northern Ireland.

d) For external installation, which is commonplace and remains allowed in the UK, EN 1451-1:1998 only requires that additional requirements depending on the climate be agreed between the manufacturer and the user (in clause 14: otherwise, in line with European practice, EN 1451-1:1998 only gives specific requirements for products for discharge systems intended to be installed within buildings.) If the product is to be installed externally, it may require protection by painting or some other means.

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

e) The products should only be used in application area B, i.e. suspended from brackets above ground and installed in accordance with BS 5572 using the N socket variants as specified. EN 1451-1:1998 provides a choice of three series of pipe wall thickness. When installing piping in accordance with BS 5572 (or equivalent) in above-ground situations, it is strongly recommended that series S 16 is specified and used.

For external installation, see item d) of this foreword. The advice of the manufacturer of products conforming to BS EN 1451-1 should be sought accordingly.

f) In respect of fire regulations (see 4.4), The Building Regulations 1991, Approved Document B3, Section 10 requires that where PP pipe with an internal diameter greater than 40mm (1½") penetrates a fire wall, floor or enclosure the point of penetration is protected by a proprietary fire seal. This seal must be certificated by third-party testing to show that it is effective with PP pipes.

Analogous provisions apply in Scotland and Northern Ireland respectively.

g) For underground installations, see BS EN 1852-1 or equivalent product specifications for such situations and take account of current national installation practices, e.g. BS EN 1610 and BS EN 752.

Editorial note: Reference to regulations

In 4.4 the only "requirement" is that "pipes and fittings... shall conform to any relevant requirements on fire regulations". Since the authority for such requirements lies with national regulators and not with standards organizations, which do not have the power to waive regulations even should they so wish, this type of information in standards should be presented as a note, or as a statement in a foreword or introduction. As information it can refer in general or specific terms to the existence of current regulations/legislation/directives applicable to the products or the conditions of their use. The expression here as part of the normative text is inappropriate and should not be considered an acceptable precedent for other standards to follow.

Warning This British Standard, which is identical with EN 1451-1:1998, does not necessarily detail all the precautions necessary to meet the requirements of the Health and Safety at Work etc. Act 1974. Attention should be paid to any appropriate safety precautions and the test methods referred to in EN 1451-1 should be operated only by trained personnel.

Cross-references

The British Standards which implement international or European publications referred to in this document may be found in the BSI Catalogue under the section entitled "International Standards Correspondence Index", or by using the "Search" facility of the *BSI Electronic Catalogue* or of British Standards Online.

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 does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 32, an inside back cover and a back cover.

The BSI copyright date displayed in this document indicates when the document was last issued.