

Plastics piping systems — Thermoplastics pipes — Determination of resistance to internal pressure at constant temperature

The European Standard EN 921:1994 has the status of a
British Standard

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee PRI/61, Plastics piping systems and components, upon which the following bodies were represented:

- British Gas plc
- British Plastics Federation
- British Plumbing Fittings Manufacturers' Association
- British Valve and Actuator Manufacturers' Association
- Department of the Environment (British Board of Agrément)
- Department of the Environment (Building Research Establishment)
- Department of the Environment (Property and Buildings Directorate)
- Department of Transport
- Electricity Association
- Federation of Civil Engineering Contractors
- Health and Safety Executive
- Institute of Building Control
- Institute of Materials
- Institution of Civil Engineers
- Institution of Gas Engineers
- Institution of Water and Environmental Management
- National Association of Plumbing, Heating and Mechanical Services Contractors
- Pipeline Industries Guild
- Plastics Land Drainage Manufacturers' Association
- Society of British Gas Industries
- Society of British Water Industries
- Water Companies Association
- Water Services Association of England and Wales

The following bodies were also represented in the drafting of the standard, through subcommittees and panels:

- Engineering Equipment and Materials Users' Association
- ERA Technology Ltd.
- RAPRA Technology Ltd.

This British Standard, having been prepared under the direction of the Sector Board for Materials and Chemicals, was published under the authority of the Standards Board and comes into effect on 15 June 1995

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National foreword

This British Standard has been prepared by Technical Committee PRI/61 and is the English language version of EN 921:1994 *Plastics piping systems — Thermoplastics pipes — Determination of resistance to internal pressure at constant temperature*, published by the European Committee for Standardization (CEN).

It is incorporated into BS 2782 *Methods of testing plastics Part 11 Thermoplastics pipes, fittings and valves*, as Method 1127A:1995, for association with related test methods for plastics materials and plastics piping components.

This test method has been prepared for reference by other standards under preparation by CEN for specification of plastics piping systems and components. It has been implemented to enable experience of the method to be gained and for use for other fresh applications.

It is also for use for the revision or amendment of other national standards as practicable, but it should not be presumed to apply to any existing standard or specification which contains or makes references to a different test method until that standard/specification has been amended or revised to make reference to this method and adjust any requirements as appropriate.

BS 4728:1971, which provides for alignment with ISO 1167 where applicable, will be withdrawn when no longer required to support existing national standards for thermoplastics piping systems pending replacement by CEN standards currently under preparation for such piping systems.

The principal differences between this method and BS 4728:1971 include the following.

- a) This method allows for the use of air or of another liquid as alternatives to water for the external environment of the test piece.
- b) For testing without hydrostatic end thrust, this method allows for use of external tie rods as an alternative to an internal coaxial tie rod.
- c) The permitted deviations for the constant pressure are reduced from

$$\pm 2 \% \text{ to } \frac{+2}{-1} \%$$

- d) For “evaluation” of pipe and/or fitting materials, this method specifies use of end caps which transmit the end thrust. Such end caps are designated “type a)”: those which do not are designated “type b)”.
- e) For testing pipes with nominal outside diameter greater than 315 mm a minimum free length of at least 1 000 mm is required, not 3*d*.
- f) This method also covers the testing of fitting material in the form of injection-moulded pipe, in which case the minimum free length, excluding the integral closed end, if any, is 140 mm.
- g) This method does not include an “acceptance test” (batch test) of the type given in 6.1 of BS 4728:1971.
- h) This method gives conditioning times depending on groups of wall thickness, instead of 1 h after attaining the test temperature.
- i) This method requires the time for pressurization to be the shortest time practicable between 30 s and 1 h, instead of “within 60 s”, and hence the imprecise upper limit of pipe sizes which it is practicable to test is considerably extended.
- j) This method requires any pipe failure to be classified as brittle or ductile.

WARNING. It is necessary to take account of the consequences of failure of the components under pressure and to contain the test piece or apparatus accordingly.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, the EN title page, pages 2 to 7 and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.