BS 2782-0:2011

BSI Standards Publication

Methods of testing plastic

Part 0: Introduction

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Contents

Summary of pages

This document comprises a front cover, an inside front cover, pages i to ii, pages 1 to 28, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI and came into effect on 30 September 2011. It was prepared by Technical Committee PRI/21 *Testing of Plastics.* A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 2872:2004, which is withdrawn.

Information about this document

Currently, the majority of these test methods are identical to the methods standardized by Technical Committee ISO/TC 61, *Plastics*, and where this is so, they have taken the ISO number (designated BS ISO nnnn, where n is a digit in the identifier) or are dual numbered with the ISO and BS 2782 numbers. Additionally, many methods have been adopted as European Standards by CEN/TC 249, Plastics (designated BS EN ISO nnnn). As methods are revised, the policy is to discontinue dual numbering and to adopt the ISO number only. Some methods for which there is no ISO equivalent or where the British Standard differs from the ISO standard continue as methods within BS 2782. It is intended that the appropriate test methods, however numbered, be specified in all British Standards for plastics materials and products. Annex A lists the remaining methods and the ISO and CEN methods that have been adopted as British standards.

Contractual and legal considerations

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.

1 Scope

This part of BS 2782 gives a general introduction to the methods of test for plastics some of which are presented in the other Parts.

Annex A lists the individual methods and Annex B describes an obsolescent method (508A), formerly given in BS 2782:1970 and still referred to by the Building Regulations [1].

2 Content and usage of BS 2782

The ISO test methods adopted as British Standards together with the methods in BS 2782 provide a rationalized collection of methods for testing plastics materials and includes tests that are applied to moulding and extrusion compounds, synthetic resins, reinforced plastics, semi-fabricated products such as sheet, film, rod and tube, and finished articles in the form of mouldings and extrusions. Many of the methods are restricted to one set of conditions, and are not necessarily adequate for the production of design data; attention is therefore drawn to BS 4618. The acquisition and presentation of comparable data for properties of plastics is given in BS EN ISO 10350 and BS EN ISO 11403. Many of the methods are not suitable for cellular plastics.

3 Units

Numerical values in BS 2782 are normally expressed in the units of the Système International d'Unités (SI units), described in ISO 1000.

4 Apparatus and reagents

Apparatus should comply with the requirements of the appropriate British Standard. Reagents should be of recognized analytical reagent quality unless otherwise stated, and distilled or demineralized water should be used wherever water is specified (see BS EN ISO 3696).

5 Sampling

In cases where special precautions are needed to ensure that the test pieces adequately represent the properties of the material in bulk, a sampling procedure is given in the specification for the material.

6 Number of test pieces

It is recognized that specifications for test programmes sometimes require use of different numbers of test pieces from those given in the test method standard. For example, in production, a more informative and accurate result can be obtained if fewer test pieces are taken from one article but more articles are tested. It should be noted, however, that in general, the use of fewer test pieces yields less reliable results.

7 Preparation of test pieces

Preparation of test pieces is often one of the most critical stages of the test procedure, and the specified conditions of preparation should be adhered to. In general, the procedure adopted enables a test piece representative of the material under test to be obtained with minimal effect on the properties of the material. Test piece preparation is normally referred to in each test method standard, usually by reference to general methods of preparation (see Annex A) or by reference to standards for the materials or products. It should be noted that, where no British Standard or other recognized specification exists, the procedure should be as agreed between the interested parties.

8 Direction of testing

The properties of certain types of sheet material can vary with direction in the plane of the sheet. In practice it is usual to cut two groups of test pieces with their major axes respectively parallel and perpendicular to the direction of some feature of the sheet that is either visible or inferred from knowledge of the method of its manufacture. For a particular test, the direction of testing is the direction of the long axis of the test pieces, unless otherwise stated.

9 Test report

When referring to a test procedure, the full reference should be quoted by giving the number of this British Standard, the method number and the date of publication, e.g. BS 2782:Method 360A:1991, or BS EN ISO 75-1:1996.

10 Standard atmospheres for conditioning and testing

The properties of plastics can alter considerably with changes in temperature and relative humidity. It is usually necessary to condition test pieces before testing, in addition to controlling the atmosphere during testing, in order to improve the reproducibility of test results. As large a surface as possible of each test piece should be exposed to the conditioning atmosphere. Where appropriate, the test method specifies the conditioning procedure. The standard atmospheres for conditioning and testing given in BS EN ISO 291 should be used whenever possible.

Annex A (informative) List of methods in BS 2782 published separately and degree of equivalence to international standards

A.1 Parts

BS 2782 comprises the following 12 parts:

Part 1: Thermal properties;

Part 2: Electrical properties;

Part 3: Mechanical properties;

Part 4: Chemical properties;

Part 5: Optical and colour properties, weathering;

Part 6: Dimensional properties;

Part 7: Rheological properties;

Part 8: Other properties;

Part 9: Sampling and test specimen preparation;

Part 10: Glass reinforced plastics;

Part 11: Thermoplastics pipes, fittings and valves;

Part 12: Reinforced plastics pipes, fittings and valves.

A.2 Correspondence between BS 2782 and international standards

The relationship between the individual methods of BS 2782 and international standards is given in Table A.1. The equivalent ISO numbers are given.

Table A.1 **Methods in BS 2782 and corresponding international standards (1 of 22)**

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
130A	*Part 1: Thermal properties – Determination of the thermal stability of polyvinyl chloride by the Congo red method*	1991 (2002)	ISO 182-1 (*Dual numbered*)
131B	*Part 1: Thermal properties – Determination of extensibility after heat ageing of flexible polyvinyl chloride sheet*	1983 (1994)	—
131C and 131D	*Part 1: Thermal properties – Crushing strength after heating (heat resistance) of thermosetting moulding material – Crushing strength after heating (heat resistance) of thermosetting laminated sheet or mouldings*	1978 (2002)	—
134A and 134B	*Part 1: Thermal properties – Determination of the oxidation induction time of thermoplastics*	1992 (1999)	—
140A[B)]	*Part 1: Thermal properties – Determination of the burning behaviour of horizontal and vertical specimens in contact with a small-flame ignition source*	1992	ISO 1210 (*Dual numbered*)
140D	*Part 1: Thermal properties – Flammability of a test piece 550 mm × 35 mm of thin polyvinyl chloride sheeting (laboratory method)*	1997	—
140E (obsolescent)	*Part 1: Thermal properties – Flammability of a small, inclined test piece exposed to an alcohol flame (laboratory method)*	1982 (1988)	—
150C	*Part 1: Thermal properties – Determination of low temperature extensibility of flexible polyvinyl chloride sheet*	1983 (1994)	—
150D	*Part 1: Thermal properties – Cold crack temperature of film and thin sheeting*	1976 (1993)	—
151A	*Part 1: Thermal properties – Determination of cold bend temperature of flexible polyvinyl chloride extrusion compound*	1984 (1992)	—
153A	*Part 1: Thermal properties – Determination of stiffness in torsion of flexible materials (general method)*	1991 (2002)	ISO 458-1 (*Dual numbered*)
153B	*Part 1: Thermal properties – Determination of stiffness in torsion of flexible materials (method for vinyl chloride compounds)*	1991 (2002)	ISO 458-2 (*Dual numbered*)
230A	*Part 2: Electrical properties – Determination of volume resistivity*	1982	BS 903 C2 (*Dual numbered*)
231A	*Part 2: Electrical properties – Determination of surface resistivity*	1991	BS 903 C1 (*Dual numbered*)
232	*Part 2: Electrical properties – Determination of insulation resistance*	1992	BS 903 C5 IEC 60167 (*Triple numbered*)

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***2** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
240A/B	*Part 2: Electrical properties – Determination of loss tangent and permittivity at power and audio frequencies*	1982	BS 903 C3 (*Dual numbered*)
241A	*Part 2: Electrical properties – Determination of effect of polyvinyl chloride compound on the loss tangent of polyethylene*	1984 (1992)	—
320A to 320F (obsolescent)	*Part 3: Mechanical properties – Tensile strength, elongation and elastic modulus (Amendment 1993)*	1976 (1996)	—
323B	*Part 3: Mechanical properties – Flexural vibration – Non-resonance method*	1996 (2002)	ISO 6721-5 (*Dual numbered*)
323C	*Part 3: Mechanical properties – Shear vibration – Non-resonance method*	1996 (2002)	ISO 6721-6 (*Dual numbered*)
323D	*Part 3: Mechanical properties – Torsional vibration – Non-resonance method*	1996 (2002)	ISO 6721-7 (*Dual numbered*)
323E	*Part 3: Mechanical properties – Longitudinal and shear vibration – Wave-propagation method*	1997	ISO 6721-8 (*Dual numbered*)
327A	*Part 3: Mechanical properties – Determination of tensile strength and elongation at break polytetrafluoroethylene (PTFE) products*	1993 (2002)	—
332A (obsolescent)	*Part 3: Mechanical properties – Stiffness of plastics film*	1976 (1983)	—
341A	*Part 3: Mechanical properties – Determination of apparent interlaminar shear strength of reinforced plastics*	1977 (1999)	—
352F	*Part 3: Mechanical properties – Determination of impact resistance by the free-falling dart method (instrumented puncture method)*	1996	ISO 7765-2 (*Dual numbered*)
360C	*Part 3: Mechanical properties – Determination of tear resistance of plastics film and sheeting by the initiation method*	1991 (1996)	—
370	*Part 3: Mechanical properties – Determination of resistance to wear by abrasive wheels*	1996 (2001)	ISO 9352 (*Dual numbered*)
432A	*Part 4: Chemical properties – Determination of residual styrene monomer content in reinforced plastics based on unsaturated polyester resins*	1991 (2002)	ISO 4091 (*Dual numbered*)
432D	*Part 4: Chemical properties – Determination of styrene evaporation from unsaturated polyester resins*	1995 (2002)	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(**3** of **22**)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
433A	*Part 4: Chemical properties – Determination of inorganic chlorine in epoxide resins and glycidyl esters*	1979 (1999)	ISO 4573 (*Dual numbered*)
434B (obsolescent)	*Part 4: Chemical properties – Determination of antioxidants in polyolefin compounds by ultra-violet absorption of chloroform extract*	1977 (1993)	—
434D	*Part 4: Chemical properties – Determination of antioxidants in polyolefin compounds by a spectrophotometric method*	1975 (1999)	—
451A	*Part 4: Chemical properties – Determination of acetone-soluble matter in phenolic mouldings*	1978 (1999)	ISO 59 (*Dual numbered*)
451B (obsolescent)	*Part 4: Chemical properties – Determination of acetone-soluble matter in phenolic moulding materials after moulding*	1978 (1983)	—
451F to 451J	*Part 4: Chemical properties – Determination of formaldehyde in phenolic mouldings (colorimetric method) – Determination of formaldehyde in phenolic mouldings (gravimetric method) – Determination of sulphates in phenolic mouldings – Determination of chlorides in phenolic mouldings*	1978 (1999)	—
452B	*Part 4: Chemical properties – Determination of carbon black content of polyolefin compound*	1993 (1999)	—
452C (obsolescent)	*Part 4: Chemical properties – Determination of butyl rubber content of low density polyethylene compounds*	1978 (1986)	—
452D to 452F	*Part 4: Chemical properties – Determination of pH of water extract of polyolefin compound – Determination of water-soluble sulphates in polyolefin compound – Determination of water-soluble chlorides in polyolefin compound*	1978 (1999)	—
453C	*Part 4: Chemical properties – Determination of residual acrylonitrile monomer content in styrene/acrylonitrile copolymer using gas chromatography* 1996	1996 (2001)	ISO 4581 (*Dual numbered*)
454G	*Part 4: Chemical properties – Polymer dispersions – Determination of sieve residue (gross particle and coagulum content)*	1996 (2003)	ISO 4576 (*Dual numbered*)
470B	*Part 4: Chemical properties – Determination of ash of polyalkylene terephthalates*	1999	ISO 3451-2 (*Dual numbered*)
470C	*Part 4: Chemical properties – Determination of ash of unplasticized cellulose acetate*	1991 (2001)	ISO 3451-3 (*Dual numbered*)

Table A.1 **Methods in BS 2782 and corresponding international standards** *(**4** of **22**)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
520A	*Part 5: Optical and colour properties, weathering – Determination of specular gloss*	1992 (1999)	—
521A	*Part 5: Optical and colour properties, weathering – Determination of haze of film and sheet*	1992 (1999)	—
530A/B (obsolescent)	*Part 5: Optical and colour properties, weathering – Determination of yellowness index Determination of the colour of near-white or near-colourless materials*	1976	—
540C	*Part 5: Optical and colour properties, weathering – Determination of ultraviolet radiation intensity using polysulphone film*	1988 (2000)	—
540G	*Part 5: Optical and colour properties, weathering – Methods of exposure to laboratory light sources – Open flame carbon-arc lamps*	1995	ISO 4892-4 (*Dual numbered*)
552A	*Part 5: Optical and colour properties, weathering – Determination of changes in colour and variations in properties after exposure to daylight under glass, natural weathering or laboratory light sources*	1999	ISO 4582 (*Dual numbered*)
620A to 620D	*Part 6: Dimensional properties – Determination of density and relative density of non-cellular plastics*	1991 (1996)	ISO 1183
621C	*Part 6: Dimensional properties – Determination of the bulk factor of moulding materials*	1983 (2001)	ISO 171 (*Dual numbered*)
621D	*Part 6: Dimensional properties – Determination of compacted apparent bulk density of PVC resins*	1978 (1989)	ISO 1068 (*Dual numbered*)
630A	*Part 6: Dimensional properties – Determination of thickness by mechanical scanning of flexible sheet*	1994	ISO 4593 (*Dual numbered*)
631A	*Part 6: Dimensional properties – Determination of gravimetric thickness and yield of flexible sheet*	1993	ISO 4591 (*Dual numbered*)
632A	*Part 6: Dimensional properties – Determination of length and width of flexible sheet*	1993	ISO 4592 (*Dual numbered*)
640A	*Part 6: Dimensional properties – Determination of shrinkage of test specimens in the form of bars of compression moulded thermosetting moulding materials*	1979 (2000)	ISO 2577 (*Dual numbered*)
641A	*Part 6: Dimensional properties – Determination of dimensional stability at 100 °C of flexible polyvinyl chloride sheet*	1983 (1996)	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***5** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
643A	*Part 6: Dimensional properties – Shrinkage on heating film intended for shrink wrapping applications*	1976 (1996)	—
720B	*Part 7: Rheological properties – Cup flow of phenolic and alkyd moulding materials*	1979 (2002)	
721A	*Part 7: Rheological properties – Determination of resin flow from resin impregnated glass fabric*	1988 (2002)	
732D	*Part 7: Rheological properties – Determination of the viscosity of polycarbonate (PC) moulding and extrusion materials in dilute solution using capillary viscometers*	1999	ISO 1628-4 (*Dual numbered*)
732F	*Part 7: Rheological properties – Determination of viscosity number of methyl methacrylate polymers*	1991 (1996)	ISO 1628-6 (*Dual numbered*)
740B	*Part 7: Rheological properties – Polymer dispersions and synthetic rubber latices – Freeze-thaw cycle stability test*	1996 (2002)	ISO 1147 (*Dual numbered*)
740C	*Part 7: Rheological properties – Polymer dispersions – Determination of white point temperature and minimum film-forming temperature*	1996 (2003)	ISO 2115 (*Dual numbered*)
820A	*Part 8: Other properties – Determination of water vapour transmission rate (dish method)*	1996	ISO 2528 (*Dual numbered*)
822A	*Part 8: Other properties – Determination of water vapour transmission rate of plastics films (sachet method)*	1992 (1999)	—
823A/B	*Part 8: Other properties – Methods for the assessment of carbon black dispersion in polyethylene using a microscope*	1978 (2002)	—
826A	*Part 8: Other properties – Determination of adhesion of print on plastics sheet*	1992	—
835A	*Part 8: Other properties – Determination of gelation time of phenolic resins*	1980 (2002)	—
835B	*Part 8: Other properties – Determination of gelation time of polyester resins (manual method)*	1980 (2002)	—
835D	*Part 8: Other properties – Determination of gelation time of thermosetting resins using a hot plate*	1980 (1994)	—
940A	*Part 9: Sampling and test specimen preparation – Preparation of test specimens of amorphous thermoplastic in the form of bars with a specified reversion*	1990 (2003)	ISO 2557-1 (*Dual numbered*)

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***6** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
940B	*Part 9: Sampling and test specimen preparation – Preparation of test specimens of amorphous thermoplastics with a specified reversion by injection moulding rectangular plates*	1989 (1999)	ISO 2557-2 (*Dual numbered*)
1001	*Part 10: Glass reinforced plastics – Measurement of hardness by means of a Barcol impressor*	1977 (2003)	EN 59 (*Dual numbered*)
1002	*Part 10: Glass reinforced plastics – Determination of loss on ignition*	1977 (2003)	EN 60 (*Dual numbered*)
1003	*Part 10: Glass reinforced plastics – Determination of tensile properties*	1977 (2003)	EN 61 (*Dual numbered*)
1004	*Part 10: Glass reinforced plastics – Standard atmospheres for conditioning and testing*	1977 (2003)	EN 62 (*Dual numbered*)
1005	*Part 10: Glass reinforced plastics – Determination of flexural properties – Three point method*	1977 (2003)	EN 63 (*Dual numbered*)
1006	*Part 10: Glass reinforced plastics – Determination of volatile matter and resin content of synthetic resin-impregnated textile glass fabric*	1978 (2002)	—
1108A	*Part 11: Thermoplastic pipes, fittings and valves – True impact rate (TIR) boundaries of pipes*	1989	—
1109A	*Part 11: Thermoplastic pipes, fittings and valves – Resistance to environmental stress cracking of polyethylene pipes and fittings for non-pressure applications*	1989 (1999)	—
1121B	*Part 11: Thermoplastic pipes, fittings and valves – Thermoplastic pipes for the conveyance of fluids – Nominal outside diameters and pressures – Metric series*	1997	ISO 161-1 (*Dual numbered*)
1121C	*Part 11: Thermoplastic pipes, fittings and valves – Thermoplastic pipes for the conveyance of fluids – Nominal outside diameters and pressures – Inch-based series*	1997	ISO 161-2 (*Dual numbered*)
1121H	*Part 11: Thermoplastic pipes, fittings and valves – Thermoplastics pipes for the transport of liquids under pressure – Calculation of head losses*	1996	ISO/TR 10501 (*Dual numbered)*
EN 59 (*see 1001*)	—	—	1001 (*Dual numbered)*

Table A.1 **Methods in BS 2782 and corresponding international standards** *(**7** of **22**)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
EN 60 (*see 1002*)	—	—	1002 (*Dual numbered)*
EN 61 (*see 1003*)	—	—	1003 (*Dual numbered)*
EN 62 (*see 1004*)	—	—	1004 (*Dual numbered)*
EN 63 *(see 1005*)	—	—	1005 (*Dual numbered)*
BS EN ISO 62	*Plastics – Determination of water absorption*	2008	—
BS EN ISO 75-1	*Plastics – Determination of temperature of deflection under load – Part 1: General test method*	2004	—
BS EN ISO 75-2	*Plastics – Determination of temperature of deflection under load – Part 2: Plastics and ebonite*	1996	—
BS EN ISO 75-3	*Plastics – Determination of temperature of deflection under load – Part 3: High-strength thermosetting laminates and long-fibre-reinforced plastics*	2004	—
BS EN ISO 119	*Plastics – Phenol-formaldehyde mouldings – Determination of free phenols – Iodometric method*	1998	—
BS EN ISO 120	*Plastics – Phenol-formaldehyde mouldings – Determination of free ammonia and ammonium compounds (colorimetric comparison method)*	1998	—
ISO 161-1 (*see 1121B*)	—	—	1121B (*Dual numbered)*
ISO 161-2 (*see 1121C*)	—	—	1121C (*Dual numbered)*
ISO 171 (*see 621C*)			621C (*Dual numbered)*
BS EN ISO 172	*Plastics – Phenol-formaldehyde mouldings – Detection of free ammonia*	1998	—
BS EN ISO 175	*Plastics – Methods of test for the determination of the effects of immersion in liquid chemicals*	2010	—
BS EN ISO 177	*Plastics – Determination of migration of plasticizers*	2000	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***8** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN ISO 178	*Plastics – Determination of flexural properties*	2010	—
BS EN ISO 179	*Plastics – Determination of Charpy impact strength*	1997	—
BS EN ISO 180	*Plastics – Determination of izod impact strength*	2001	—
ISO 182-1 *(see 130A)*	—	—	130A (*Dual numbered)*
BS EN ISO 182-2	*Plastics – Determination of the tendency of compounds and products based on vinyl chloride homopolymers and copolymers to evolve hydrogen chloride and any other acidic products at elevated temperatures – Part 2: pH method*	2000	—
BS EN ISO 182-3	*Plastics – Determination of the tendency of compounds and products based on vinyl chloride homopolymers and copolymers to evolve hydrogen chloride and any other acidic products at elevated temperatures – Part 3: Conductometric method*	2001	—
BS EN ISO 182-4	*Plastics – Determination of the tendency of compounds and products based on vinyl chloride homopolymers and copolymers to evolve hydrogen chloride and any other acidic products at elevated temperatures – Part 4: Potentiometric method*	2000	—
BS EN ISO 293	*Plastics – Compression moulding test specimens of thermoplastic materials*	2005	—
BS EN ISO 294-1	*Plastics – Injection moulding of test specimens of thermoplastic materials – Part 1: General principles, and moulding of multipurpose and bar test specimens*	1998 (2003)	—
BS EN ISO 294-2	*Plastics – Injection moulding of test specimens of thermoplastic materials – Part 2: Small tensile bars*	1998 (2003)	—
BS EN ISO 294-3	*Plastics – Injection moulding of test specimens of thermoplastic materials – Part 3: Small plates*	2003	—
BS EN ISO 294-4	*Plastics – Injection moulding of test specimens of thermoplastic materials Part 4: – Determination of moulding shrinkage*	2003	—
BS EN ISO 295	*Plastics – Compression moulding of test specimens of thermosetting materials*	2005	—
BS EN ISO 307	*Plastics – Polyamides – Determination of viscosity number*	2007	—
BS EN ISO 308	*Plastics – Phenolic moulding materials – Determination of acetone-soluble matter (apparent resin content of material in the unmoulded state)*	1998 (2003)	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***9** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
ISO 458-1 (*see 153A*)	—		153A (*Dual numbered)*
ISO 458-2 (*see 153B*)			153B (*Dual numbered)*
BS EN ISO 489	*Plastics – Determination of refractive index*	1999	—
BS EN ISO 527-1	*Plastics – Determination of tensile properties – Part 1: General principles*	1996	—
BS EN ISO 527-2	*Plastics – Determination of tensile properties – Part 2: Test conditions for moulding and extrusion plastics*	1996	—
BS EN ISO 527-3	*Plastics – Determination of tensile properties – Part 3: Test conditions for films and sheets*	1996	—
BS EN ISO 527-4	*Plastics – Determination of tensile properties – Part 4: Test conditions for isotropic and orthotropic fibre reinforced plastic composites*	1997	—
BS EN ISO 527-5	*Plastics – Determination of tensile properties – Part 5: Test conditions for unidirectional fibre-reinforced composites*	2009	—
BS EN 578	*Plastics piping systems – Plastics pipes and fittings – Determination of the opacity*	1994	—
BS EN 579	*Plastics piping systems – Crosslinked polyethylene (PE-X) pipes – Determination of degree of crosslinking by solvent extraction*	1994	—
BS EN 580	*Plastics piping systems – Unplasticized poly(vinyl chloride) (PVC-U) pipes – Test method for the resistance to dicholoromethane at a specified temperature (DCMT)*	2003	—
BS EN ISO 585	*Plastics – Unplasticized cellulose acetate – Determination of moisture content*	1999	—
BS EN ISO 604	*Plastics – Determination of compressive properties*	2003	—
BS EN 637	*Plastics piping systems – Glass-reinforced plastics components – Determination of the amounts of constituents using the gravimetric method*	1995	—
BS EN 705	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes and fittings – Methods for regression analyses and their use*	1995	—
BS EN 712	*Thermoplastic piping systems – End-load bearing mechanical joints between pressure pipes and fittings – Test method for resistance to pull-out under constant longitudinal force*	1995	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***10** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN 713	*Plastics piping systems – Mechanical joints between fittings and polyolefin pressure pipes – Test method for leaktightness under internal pressure of assemblies subjected to bending*	1995	—
BS EN 714	*Thermoplastic piping systems – Non-end-load-bearing elastomeric sealing ring type joints between pressure pipes and moulded fittings – Test method for leaktightness under internal hydrostatic pressure without end thrust*	1995	—
BS EN 715	*Thermoplastic piping systems – End-load-bearing joints between small diameter pressure pipes and fittings – Test method for leaktightness under internal water pressure, including end thrust*	1995 (1999)	—
BS EN 727	*Plastics piping and ducting systems – Thermoplastic pipes and fittings – Determination of Vicat softening temperature (VST)*	1995	—
BS EN 728	*Plastics piping and ducting systems – Polyolefin pipes and fittings – Determination of oxidation induction time*	1997	—
BS EN 743	*Plastic piping and ducting systems – Thermoplastics pipes – Determination of the longitudinal reversion*	1995	—
BS EN 744	*Plastics piping and ducting systems – Thermoplastics pipes – Test method for resistance to external blows by the round-the-clock method*	1996	—
BS EN 761	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of the creep factor under dry conditions*	1995	—
BS EN 763	*Plastics piping and ducting systems – Injection-moulded thermoplastics fittings – Test method for visually assessing effects of heating*	1995	—
BS EN 802	*Plastics piping and ducting systems – Injection-moulded thermoplastics fittings for pressure piping systems – Test method for maximum deformation by crushing*	1995 (1999)	—
BS EN 803	*Plastics piping systems – Injection-moulded thermoplastics fittings for elastic sealing ring type joints for pressure piping – Test method for resistance to a short-term internal pressure without end thrust*	1995 (1999)	—
BS EN 804	*Plastics piping systems – Injection-moulded socket fittings for solvent-cemented joints for pressure piping – Test method for resistance to a short-term internal hydrostatic pressure*	1995 (1999)	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***11** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN 852-1	*Plastics piping systems for the transport of water intended for human consumption – Migration assessment – Part 1: Determination of migration values of plastics pipes*	1996	—
BS EN ISO 868	*Plastics and ebonite – Determination of indentation hardness by means of a durometer (Shore hardness)*	2003	—
BS EN ISO 877	*Plastics – Methods of exposure to direct weathering, to weathering using glass-filtered daylight, and to intensified weathering by daylight using Fresnel mirrors*	1997 (2003)	—
BS EN ISO 899-1	*Plastics – Determination of creep behaviour – Part 1: Tensile creep*	2003	—
BS EN ISO 899-2	*Plastics – Determination of creep behaviour – Part 2: Flexural creep by three-point loading*	2003	—
BS 903 C1 (*see 231A*)	—	—	231A (*Dual numbered)*
BS 903 C2 (*see 230A*)	—	—	230A (*Dual numbered)*
BS 903 C3 (*see 240A/B*)	—	—	240 A/B (*Dual numbered)*
BS 903 C5 (*see 232*)	—	—	232 (*Dual numbered)*
BS EN 911	*Plastics piping systems – Elastomeric sealing ring type joints and mechanical joints for thermoplastic pressure piping – Test method for leaktightness under external hydrostatic pressure*	1996	—
BS EN 917	*Plastics piping systems – Thermoplastic valves – Test methods for resistance to internal pressure and leaktightness*	1997	—
BS EN 921	*Plastics piping system – Thermoplastic pipes – Determination of resistance to internal pressure at constant temperature*	1995	—
BS EN 922	*Plastics piping and ducting systems – Pipes and fittings of unplasticized poly(vinyl chloride) (PVC-U) – Specimen preparation for determination of the viscosity*	1995 (1999)	—
ISO 1068 (*see 621D*)	—	—	621D (*Dual numbered)*

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***12** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN 1119	*Plastics piping systems – Joints for glass-reinforced thermosetting plastics (GRP) pipes and fittings – Test methods for leaktightness and resistance to damage of non-thrust resistant flexible joints with elastomeric sealing elements*	2009	—
BS EN 1053	*Plastics piping systems – Thermoplastics piping systems for non-pressure application – Test methods for watertightness*	1996	—
BS EN 1054	*Plastics piping systems – Thermoplastics piping systems for soil and waste discharge – Test method for airtightness of joints*	1996	—
BS EN 1055	*Plastics piping systems – Thermoplastics piping systems for soil and waste discharge inside buildings – Test method for resistance to elevated temperature cycling*	1996	—
BS EN 1056	*Plastics piping and ducting systems – Plastics pipes and fittings – Method for exposure to direct (natural) weathering*	1996	—
BS EN ISO 1061	*Plastics – Unplasticized cellulose acetate – Determination of free acidity*	1999	—
BS EN 1120	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes and fittings – Determination of the resistance to chemical attack from the inside of a section in a deflected condition*	1996	—
BS EN ISO 1133	*Plastics – Determination of the melt mass-flow rate (MFR) and the melt volume-flow rate (MVR) of thermoplastics*	2000	—
ISO 1147 (*see 740B*)	—	—	740B (*Dual numbered)*
BS EN ISO 1157	*Plastics – Cellulose acetate in dilute solution – Determination of viscosity number and viscosity ration*	2000	—
BS EN ISO 1167-1	*Thermoplastics pipes, fittings and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure – Part 1: General method*	2006	—
BS EN ISO 1167-2	*Thermoplastics pipes, fittings and assemblies for the conveyance of fluids – Determination of the resistance to internal pressure – Part 2: Preparation of pipe test pieces*	2006	—
ISO 1210 *(see 140A[B)])*	—	—	140A[B)] (*Dual numbered)*

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***13** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN 1225	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of the creep factor under wet conditions and calculation of the long-term specific ring stiffness*	1996	—
BS EN 1226	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Test method to prove the resistance to initial ring deflection*	1996	—
BS EN 1227	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of the long-term ultimate relative ring deflection under wet conditions*	1998	—
BS EN 1228	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of initial specific ring stiffness*	1997	—
BS EN 1229	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes and fittings – Test methods to prove the leaktightness of the wall under short-term internal pressure*	1997	—
BS EN ISO 1264	*Plastics – Homopolymer and copolymer resins – Determination of pH of aqueous extract*	1997	—
BS ISO 1268-3	*Fibre-reinforced plastics – Methods of producing test plates – Part 3: Wet compression moulding*	2004	—
BS EN 1277	*Plastics piping systems – Thermoplastics piping systems for buried non-pressure applications – Test methods for leaktightness of elastomeric sealing ring type joints*	2007	—
BS EN 1393	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of initial longitudinal tensile properties*	1997	—
BS EN 1394	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of the apparent initial circumferential tensile strength*	1997	—
BS EN 1411	*Plastics piping and ducting systems – Thermoplastics pipes – Determination of resistance to external blows by the staircase method*	1996	—
BS EN 1446	*Plastics piping and ducting systems – Thermoplastics pipes – Determination of ring flexibility*	1996	—
BS EN 1447	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of long-term resistance to internal pressure*	2009	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***14** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN 1448	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) components – Test method to prove the design of rigid locked socket-and-spigot joints with elastomeric seals*	1997	—
BS EN 1450	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) components – Test methods to prove the design of bolted flange joints*	1997	—
BS EN ISO 1600	*Plastics – Cellulose acetate – Determination of light absorption of moulded specimens produced using different periods of heating*	1999	—
BS EN ISO 1628-2	*Plastics – Determination of the viscosity of polymers in dilute solution using capillary viscometers – Part 2: Poly(vinyl chloride) resins*	2000	—
BS EN ISO 1628-3	*Plastics – Determination of the viscosity of polymers in dilute solution using capillary viscometers – Part 3: Polyethylenes and polypropylenes*	2010	—
ISO 1628-4 (*see 732D*)	—	—	732D (*Dual numbered)*
BS ISO 1628-5	*Plastics – Determination of the viscosity of polymers in dilute solution using capillary viscometers – Part 5: Thermoplastic polyester (TP) homopolymers and copolymers*	1998	—
ISO 1628-6 (*see 732F*)			732F (*Dual numbered)*
BS EN 1638	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Test method for the effects of cyclic internal pressure*	1997	—
BS EN 1680	*Plastics piping systems – Valves for polyethylene (PE) piping systems – Test method for leaktightness under and after bending applied to the operating mechanism*	1997	—
BS EN 1704	*Plastics piping systems – Thermoplastic valves – Test method for the integrity of a valve after temperature cycling under bending*	1997	—
BS EN 1705	*Plastics piping systems – Thermoplastic valves – Test method for the integrity of a valve after an external blow*	1997	—
BS EN 1716	*Plastics piping systems – Polyethylene (PE) tapping tees – Test method for impact resistance of an assembled tapping tee*	1997	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***15** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN 1862	*Plastics piping systems – Glass-reinforced thermosetting plastics (GRP) pipes – Determination of the relative flexural creep factor following exposure to a chemical environment*	1998	—
BS EN ISO 1886	*Reinforcement fibres – Sampling plans applicable to received batches*	1995	—
BS EN 1979	*Plastics piping and ducting systems – Thermoplastics spirally-formed structured-wall pipes – Determination of the tensile strength of a seam*	1999	—
BS EN 1989	*Plastics piping systems – Thermoplastics piping systems – Joints for buried non-pressure sewerage applications – Test method for long-term sealing performance of joints with thermoplastic elastomer (TPE) seals by estimating the sealing pressure*	2000	—
BS EN ISO 2039-1	*Plastics – Determination of hardness – Part 1: Ball indentation method*	2003	—
BS EN ISO 2039-2	*Plastics – Determination of hardness – Part 2: Rockwell hardness*	2000	—
BS EN ISO 2114	*Plastics (polyester resins) and paints and varnishes (binders) – Determination of partial acid value and total acid value*	2000	—
ISO 2115 (*see 740C*)	—	—	740C (*Dual numbered)*
ISO 2528 (*see 820A*)			—
BS EN ISO 2554	*Plastics – Unsaturated polyester resins – Determination of hydroxyl value*	1999	—
BS EN ISO 2555	*Plastics – Resins in the liquid state or as emulsions or dispersions – Determination of apparent viscosity by the Brookfield Test method*	2000	—
BS EN ISO 2556	*Plastics – Determination of the gas transmission rate of films and thin sheets under atmospheric pressure – Manometric method*	2001	—
ISO 2557-1 (*see 940A*)	—	—	940A (*Dual numbered)*
ISO 2557-2 (*see 940B*)	—	—	940B (*Dual numbered)*

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***16** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
ISO 2577 (*see 640A*)	—	—	640A (*Dual numbered)*
BS EN ISO 2578	*Plastics – Determination of the time-temperature limits after prolonged exposure to heat*	1999	—
BS EN ISO 2818	*Plastics – Preparation of test specimens by machining*	1996 (2003)	—
BS EN ISO 3001	*Plastics Epoxy resins – Determination of epoxy equivalent*	1999	—
BS EN ISO 3146	*Plastics – Determination of melting behaviour (melting temperature or melting range) of semi-crystalline polymers by capillary tube and polarizing-microscope methods*	2000	—
BS EN ISO 3167	*Plastics – Multipurpose-test specimens*	2003	—
BS EN ISO 3219	*Plastics – Polymers/resins in the liquid state or as emulsions or dispersions – Determination of viscoscity using a rotational viscometer with defined shear rate*	1995 (2003)	—
BS EN ISO 3251	*Paints, varnishes and plastics – Determination of non-volatile-matter content*	2008	—
BS EN ISO 3451-1	*Plastics – Determination of ash – Part 1: General methods*	2008	—
ISO 3451-2 (*see 470B*)	—	—	470B (*Dual numbered)*
ISO 3451-3	—	—	—
BS EN ISO 3451-4	*Plastics – Determination of ash – Part 4: Polyamides*	2000	—
BS EN ISO 3451-5	*Plastics – Determination of ash – Part 5: Poly(vinyl chloride)*	2002	—
BS EN ISO 3521	*Plastics – Unsaturated polyester and epoxy resins – Determination of overall volume shrinkage*	2000	—
BS ISO 3597-1	*Textile-glass-reinforced plastics – Determination of mechanical properties on rods made of roving-reinforced resin – Part 1: General considerations and preparation of rods*	2003	—
BS ISO 3597-2	*Textile-glass-reinforced plastics – Determination of mechanical properties on rods made of roving-reinforced resin – Part 2: Determination of flexural strength*	2003	—
BS ISO 3597-3	*Textile-glass-reinforced plastics – Determination of mechanical properties on rods made of roving-reinforced resin – Part 3: Determination of compressive strength*	2003	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***17** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS ISO 3597-4	*Textile-glass-reinforced plastics – Determination of mechanical properties on rods made of roving-reinforced resin – Part 4: Determination of apparent interlaminar shear strength*	2003	—
ISO 4091 (*see 432A*)	—	—	432A (*Dual numbered)*
BS ISO 4433-1	*Thermoplastic pipes – Resistance to liquid chemicals – Classification – Part 1: Immersion test method*	1997	—
BS ISO 4433-2	*Thermoplastic pipes – Resistance to liquid chemicals – Classification – Part 2: Polyolefin pipes*	1997	—
BS ISO 4433-3	*Thermoplastic pipes – Resistance to liquid chemicals – Classification – Part 3: Unplasticized poly(vinyl chloride) (PVC-HI) and chlorinated poly(vinyl chloride) (PVC-C) pipes*	1997	—
BS ISO 4433-4	*Thermoplastic pipes – Resistance to liquid chemicals – Classification – Part 4: Poly(vinylidene fluoride) (PVDF) pipes*	1997	—
ISO 4573 (*see 433A*)	—	—	433A (*Dual numbered)*
ISO 4576 (*see 454G*)	—	—	454G (*Dual numbered)*
ISO 4581 (*see 453A*)	—	—	453A (*Dual numbered)*
ISO 4582 (*see 552A*)	—	—	552A (*Dual numbered)*
BS EN ISO 4589-2	*Plastics – Determination of burning behaviour by oxygen index – Part 2: Ambient temperature test*	1999	—
BS EN ISO 4589-3	*Plastics – Determination of burning behaviour by oxygen index – Part 3: Elevated temperature test*	1996	—
ISO 4591 (*see 631A*)	—	—	631A (*Dual numbered)*
ISO 4592 (*see 632A*)	—	—	632A (*Dual numbered)*

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***18** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
ISO 4593 (*see 630A*)	—	—	630A (*Dual numbered)*
BS EN ISO 4599	*Plastics – Determination of environmental stress cracking (ESC) – Bent strip method*	1997 (2003)	—
BS EN ISO 4600	*Plastics – Determination of environmental stress cracking (ESC) – Ball or pin impression method*	1998	—
BS EN ISO 4608	*Plastics – Homopolymer and copolymer resins of vinyl chloride for general use – Determination of plasticizer absorption at room temperature*	1998	—
BS EN ISO 4610	*Plastics – Vinyl chloride homopolymer and copolymer resins – Sieve analysis using air-jet sieve apparatus*	2001	—
BS EN ISO 4611	*Plastics – Determination of the effects of exposure to damp heat, water spray and salt mist*	2010	—
BS EN ISO 4614	*Plastics – Melamine-formaldehyde mouldings – Determination of extractable formaldehyde*	2000	—
BS EN ISO 4892-1	*Plastics – Methods of exposure to laboratory light sources – Part 1: General guidance*	2001	—
BS EN ISO 4892-2	*Plastics – Methods of exposure of laboratory light sources – Part 2: Xenon-arc sources*	2009	—
BS EN ISO 4892-3	*Plastics – Methods of exposure of laboratory light sources – Part 3: Fluorescent UV lamps*	2006	—
ISO 4892-4 (*see 540G*)	—	—	—
ISO 6721-5 (*see 323B*)	—	—	—
BS EN ISO 6252	*Plastics – Determination of environmental stress cracking (ESC) – Constant-tensile-stress method*	1998	—
BS EN ISO 6259-1	*Thermoplastics pipes – Determination of tensile properties – Part 1: General test method*	2001	—
BS EN ISO 6427	*Plastics – Determination of matter extractable by organic solvents (conventional methods)*	1999	—
BS EN ISO 6603-1	*Plastics – Determination of multi-axial impact behaviour of rigid plastics – Part 1: Non-instrumented impact testing*	2000	—
BS EN ISO 6603-2	*Plastics – Determination of multi-axial impact behaviour of rigid plastics – Part 2: Instrumented puncture testing*	2000	—
BS EN ISO 6721-1	*Plastics – Determination of dynamic mechanical properties – Part 1: General principles*	2002	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***19** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN ISO 6721-2	*Plastics – Determination of dynamic mechanical properties – Part 2: Torsion – Pendulum method*	1996	—
BS EN ISO 6721-3	*Plastics – Determination of dynamic mechanical properties – Part 3: Flexural vibration – Resonance-curve method*	1996	—
ISO 6721-5 (*see 323B*)	—	—	323B (*Dual numbered)*
ISO 6721-6 (*see 323C*)	—	—	323C (*Dual numbered)*
ISO 6721-7 (*see 323D*)	—	—	323D (*Dual numbered)*
ISO 6721-8 (see 323E)	—	—	323E (*Dual numbered)*
BS ISO 6721-10	*Plastics – Determination of dynamic mechanical properties – Part 10: Complex shear viscosity using a parallel-plate oscillatory rheometer*	1999	—
BS EN ISO 7327	*Plastics – Hardeners and accelerators for epoxide resins – Determination of free acid in acid anhydride*	1997 (2003)	—
BS 7506-2	*Methods for measurement in electrostatics – Part 2: Test methods*	1996	—
ISO 7765-2 (*see 352F*)	—	—	—
BS EN ISO 7808	*Plastics – Thermosetting moulding materials – Determination of transfer flow*	1999	—
BS EN ISO 8256	*Plastics – Determination of tensile-impact strength*	2004	—
BS ISO 8584-1	*Thermoplastics pipes for industrial applications under pressure – Determination of the chemical resistance factor and of the basic stress – Part 1: Polyolefin pipes*	1990	—
BS EN ISO 8619	*Plastics – Phenolic resins powder – Determination of flow distance on a heated glass plate*	2004	—
BS EN ISO 8620	*Plastics – Phenolic resin powder – Sieve analysis using air-jet sieve apparatus*	1996	—
BS EN ISO 8974	*Plastics – Phenolic resins – Determination of residual phenol content by gas chromatography*	2002	—
BS EN ISO 8975	*Plastics – Phenolic resins – Determination of pH*	1995 (2003)	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***20** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN ISO 8987	*Plastics – Phenolic resins – Determination of reactivity on a B-transformation test plate*	2005	—
BS EN ISO 8988	*Plastics – Phenolic resins – Determination of hexamethylenetetramine content – Kjeldahl method and perchlotic acid method*	1997	—
ISO 9352 (*see 370*)	—	—	370 (*Dual numbered)*
BS EN ISO 9396	*Plastics – Phenolic resins – Determination of the gel time given at a given temperature using automatic apparatus*	2001	—
BS EN ISO 9397	*Plastics – Phenolic resins – Determination of free-formaldehyde content – Hydroxylamine hydrochloride method*	1997	—
BS EN ISO 9771	*Plastics – Phenolic resins – Determination of the pseudo-adiabatic temperature rise of liquid resols when cured under acid conditions*	1997	—
BS EN ISO 9773	*Plastics – Determination of burning behaviour of thin flexible vertical specimens in contact with a small-flame ignition source*	1999	—
BS EN ISO 9944	*Plastics – Phenolic resins – Determination of electrical conductivity of resin extracts*	1995	—
BS EN ISO 9967	*Thermoplastic pipes – Determination of creep ratio*	1995	—
BS EN ISO 9969	*Thermoplastic pipes – Determination of ring stiffness*	2007	—
ISO/TR 10501 (*see 1121C*)	—	—	1121C (*Dual numbered)*
BS EN ISO 12058-1	*Plastics – Determination of viscosity using a falling-ball viscometer – Part 1: Inclined-tube method*	2002	—
BS EN 12061	*Plastics piping systems – Thermoplastics fittings – Test method for impact resistance*	1999	—
BS EN 12095	*Plastic piping systems – Brackets for rainwater piping systems – Test method for bracket strength*	1997	—
BS EN 12099	*Plastic piping systems – Polyethylene piping materials and components – Determination of volatile content*	1997	—
BS EN 12100	*Plastics piping systems – Polyethylene (PE) valves – Test method for resistance to bending between supports*	1998	—
BS EN 12106	*Plastics piping systems – Polyethylene (PE) pipes – Test method for the resistance to internal pressure after application of squeeze-off*	1998	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***21** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN 12107	*Plastics piping systems – Injection-moulded thermoplastic fittings, valves and ancillary equipment – Determination of the long-term hydrostatic strength of thermoplastics materials for injection moulding of piping components*	1998	—
BS EN 12117	*Plastics piping systems – Fitting, valves and ancillaries – Determination of gaseous flow rate/pressure drop relationship*	1998	—
BS EN 12118	*Plastic pipes systems – Determination of moisture content in thermoplastics by coulometry*	1998	—
BS EN 12119	*Plastics piping systems – Polyethylene (PE) valves – Test method for resistance to thermal cycling*	1997	—
BS EN ISO 11248	*Plastics – Thermosetting moulding materials – Evaluation of short-term performance at elevated temperatures*	2000	—
BS EN 12256	*Plastic piping systems – Thermoplastic fittings – Test method for mechanical strength or flexibility of fabricated fittings*	1998	—
BS EN ISO 12162	*Thermoplastic materials for pipes and fittings for pressure applications – Classification, designation and design coefficient*	2009	—
BS EN 12293	*Plastics piping systems – Thermoplastics pipes and fittings for hot and cold water – Test method for the resistance of mounted assemblies to temperature cycling*	2000	—
BS EN 12294	*Plastics piping systems – Systems for hot and cold water – Test method for leaktightness under vacuum*	2000	—
BS EN 12295	*Plastics piping systems – Thermoplastics pipes and associated fittings for hot and cold water – Test method for resistance of joints to pressure cycling*	2000	—
BS EN ISO 13468-1	*Plastics – Determination of the total luminous transmittance of transparent materials – Part 1: Single-beam instrument*	1997 (2003)	—
BS EN ISO 13478	*Polyolefin pipes for the conveyance of fluids – Determination of resistance to rapid crack propagation (RCP) – Full-scale test*	1997	—
BS EN ISO 13479	*Polyolefin pipes for the conveyance of fluids – Determination of resistance to crack propagation – Test method for slow crack growth on notched pipes (notch test)*	2009	—
BS EN ISO 13760	*Plastic pipes for the conveyance of fluids under pressure – Miner's rule – Calculation method for cumulative damage*	2000	—

Table A.1 **Methods in BS 2782 and corresponding international standards** *(***22** *of* **22***)*

Method number (BS 2782 method unless otherwise stated)	**Title**	**Date of publication** [A)]	**Alternative number**
BS EN ISO 13783	*Plastics piping systems – Unplasticized poly(vinyl chloride) (PVC-U) end-load-bearing double-socket joints – Test method for leaktightness and strength while subjected to bending and internal pressure*	1998	—
BS EN ISO 13844	*Plastics piping systems – Elastomeric-sealing-ring-type socket joints for use with unplasticized poly(vinyl chloride) (PVC-U) for use with PVC-U pipes – Test method for leaktightness under negative pressure*	2000	—
BS EN ISO 13845	*Plastics piping systems – Elastomeric-sealing-ring-type socket joints for use with unplasticized poly(vinyl chloride) (PVC-U) pipes – Test method for leaktightness under internal pressure and with angular deflection*	2000	—
BS ISO 18553	*Methods for the assessment of the degree of pigment or carbon black dispersions in polyolefin pipes, fitting and compounds*	2002	—
BS EN ISO 21627-2	*Plastics – Epoxy resins and related materials – Determination of chlorine content – Part 2: Easily saponifiable chlorine*	2009	—
BS EN 28233	*Thermoplastic valves – Torque – Test method*	1992 (1999)	—
BS EN 28659	*Thermoplastic valves – Fatigue strength – Test method*	1992 (1999)	—
IEC 60167 (*see 232*)	—	—	232 (*Dual numbered)*
BS EN 60695-11-20	*Fire hazard testing – Part 11-20: Test flames – 500W flame test methods*	2005	—

[A)] Dates in brackets indicate when confirmation of the validity of the standard was agreed.

[B)] See also Annex B.

Annex B (informative) Method 508A: Rate of burning, laboratory method (obsolescent)

NOTE This method was formerly published in BS 2782:1970, which has been withdrawn. The method has been declared obsolescent but is made available here because it is referred to in the Approved Document B/Building Regulations [1].

B.1 Introduction

A strip of the material is held horizontally with its transverse axis at an angle of 45° to the horizontal. A flame is applied for a short time to the free end of the strip and after its removal the time is taken for the flame of the burning specimen to travel a distance of 100 mm. The rate of burning is expressed as the distance travelled by the flame in one minute. If the flame does not reach a line 25 mm from the free end of the strip, the material is reported as "Flame does not reach first mark". If the flame does not reach a line 125 mm from the same end of the strip, the material is reported as "Flame does not reach second mark".

B.2 Form of test specimen

The specimen shall be 150 mm long, 13 mm wide and 1.5 mm ± 0.1 mm thick. Two lines shall be drawn across the specimen, one at 25 mm and the other at 125 mm from one end.

B.3 Number of test specimens

At least three specimens shall be used.

B.4 Procedure

The specimen shall be tested in a draught-free atmosphere. It shall be clamped in a rigid support at one end so that its longitudinal axis is horizontal and its transverse axis is at 45° to the horizontal and so that both lines on the specimen are clearly visible. A piece of clean wire gauze, seven meshes per linear centimetre, 130 mm square, shall be clamped in a horizontal position 6 mm below the specimen with 6 mm of the unsupported end of the specimen projecting beyond the edge of the gauze as shown in Figure B.1. An alcohol lamp or Bunsen burner with a non-luminous flame 13 mm to 19 mm in height shall be placed under the free end of the specimen so that the top of the flame just touches it. The flame shall be removed after 10 s and the specimen allowed to burn. The time taken for the edge of the flame to travel the distance of 100 mm between the two lines shall be measured with a stop-watch and the rate burning of the specimen in millimetres per minute calculated there from. For specimens in which the flame does not reach the first mark the duration of flame or afterglow after the burner has been removed shall be measured.

B.5 Test report

The test report shall state:

a) "The following test results relate only to the behaviour of the test specimens under the particular conditions of test; they are not intended as a means of assessing the potential fire hazard of the material in use.";

b) for each test specimen:

   1) the rate of burning; or

   2) that the flame does not reach the first mark; or

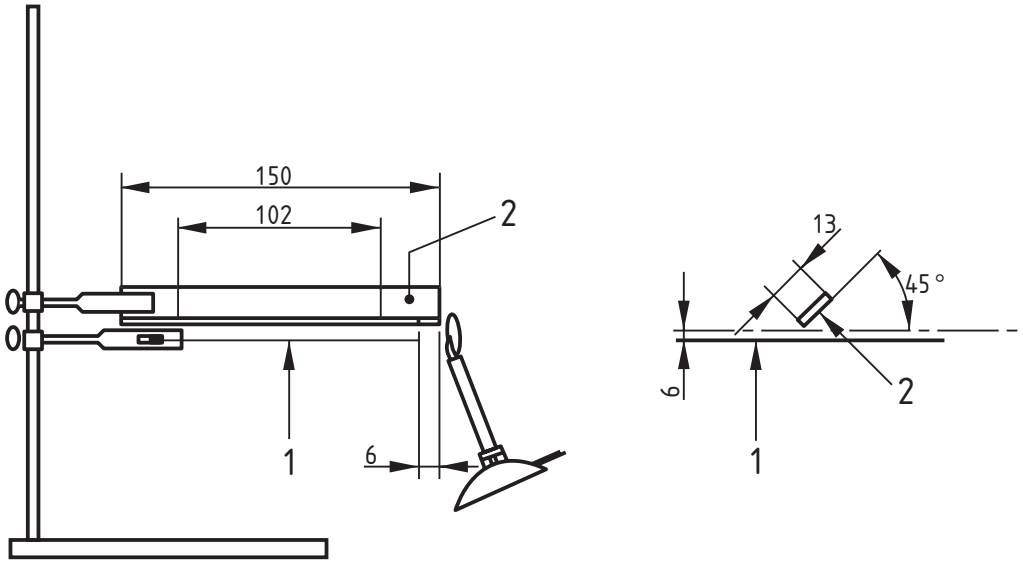
   3) that the flame does not reach the second mark;

4) for specimens where the flame does not reach the first mark, the duration of flame or after-glow after removal of the burner.

c) the conditioning, if any, of the test specimens; d) the number of this British Standard and Method, i.e. BS 2782:Method 508A.

Figure B.1 **Specimen under test for rate of burning**

Dimensions in millimetres



Key

1 Test specimen 2 Gauze about 125 square

Bibliography

For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

Standards publications

BS 2782:1970, *Methods of testing plastics*

BS 4618 (all parts), *Recommendations for the presentation of plastics design data*

BS EN ISO 291:1997, *Plastics – Standard atmosphere for conditioning and testing*

BS EN ISO 3696:1995*, Water for analytical laboratory use – Specification and test methods*

BS EN ISO 10350 (all parts), *Plastics – Acquisition and presentation of comparable single-point data*

BS EN ISO 11403 (all parts), *Plastics – Acquisition and presentation of comparable multipoint data*

BS ISO 1000:1992, *SI units and recommendations for the use of their multiples and of certain other units*

Non-standards publications

[1] GREAT BRITAIN. *The Building Regulations 2000*. London: HMSO.

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