

Methods of testing

Plastics —

Part 4: Chemical properties —

**Method 430A: Determination of water
absorption at 23 °C —**

**Method 430B: Determination of water
absorption at 23 °C with allowance for
water-soluble matter —**

**Method 430C: Determination of boiling
water absorption —**

**Method 430D: Determination of boiling
water absorption with allowance for
water-soluble matter —**

**[ISO title: Plastics — Determination of
water absorption]**

UDC 678.5/.8:678.01:539.217.3:620.1

This British Standard, having been prepared under the direction of the Plastics Standards Committee, was published under the authority of the Board of BSI and comes into effect on 28 February 1983

© BSI 03-1999

The following BSI references relate to the work on this standard:
Committee reference PLC/17
Draft for comment 78/52672 DC

ISBN 0 580 12635 8

Amendments issued since publication

Amd. No.	Date of issue	Comments

Contents

	Page
National foreword	ii
0 Introduction	1
1 Scope and field of application	1
2 References	1
3 Principle	1
4 Apparatus	1
5 Test specimens	2
6 Procedure ¹⁾	2
7 Expression of results	3
8 Test report	4
Publication referred to	Inside back cover

¹⁾ See the national foreword for details of the British Standard method reference for each of the ISO methods.

National foreword

These methods have been prepared under the direction of the Plastics Standards Committee. This group of methods 430A to 430D is identical with ISO 62-1980 “Plastics — Determination of water absorption” published by the International Organization for Standardization (ISO) and incorporates an erratum slip issued in September 1981.

Method 430A is identical with method 1 of ISO 62 and replaces method 502F of BS 2782:1970.

Method 430B is identical with method 2 of ISO 62 and replaces method 502G of BS 2782:1970.

Method 430C is identical with method 3 of ISO 62 and replaces method 503B of BS 2782:1970.

Method 430D is identical with method 4 of ISO 62 and replaces method 503C of BS 2782:1970.

Methods 502F, 502G, 503B, 503C of BS 2782:1970 are being withdrawn;

Terminology and conventions. The text of the international standard has been accepted as suitable for publication as a British Standard without deviation. Some terminology and certain conventions are not identical with those used in British Standards; attention is especially drawn to the following.

The comma has been used as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “British Standard”.

Cross-references

International standard	Corresponding British Standard
ISO 293-1974	BS 2782 Methods of testing plastics Method 901A:1977 Compression moulding test specimens of thermoplastic materials (Identical)
ISO 294-1975	Method 910A:1977 Injection moulding test specimens of thermoplastic materials (Identical)
ISO 295-1974	Method 902A:1977 Compression moulding test specimens of thermosetting materials (Identical)

There are no corresponding British Standards for ISO 2508, ISO 2818 and ISO 175, referred to in clauses 5.4.1, 5.3 and 1.3 respectively. As these references constitute informative matter only the validity of this British Standard is not affected. A related standard to ISO 2818-1980 is BS 2782:Method 930A:1977 “Preparation of test specimens by machining”. The footnote 1) to clause 2 does not apply as ISO 175 is now published. A related standard to ISO 175-1981 is BS 4618 “Recommendations for the presentation of plastics design data” Part 4 “Environmental and chemical effects” Section 4.1:1972 “Chemical resistance to liquids”.

Additional information. Methods 430A and 430B. In 6.2 and 6.3 the tolerance of $\pm 0.5\text{ }^{\circ}\text{C}$ should be used to ensure that the results obtained will be comparable with results obtained from the superseded methods 502F and 502G of BS 2782:1970. These methods 502F and 502G were based on ISO/R 62-1958 in which the only tolerance given was $\pm 0.5\text{ }^{\circ}\text{C}$. This tolerance had resulted from an extensive international programme of testing which indicated that for some materials this fine tolerance was necessary to achieve reasonable repeatability and reproducibility.