

Methods of test for **Desiccants —**

Part 11: Determination of friability and dust content

NOTE It is recommended that this Part be read in conjunction with BS 3482-1 “*Sampling, and preparation and storage of test samples*” which is issued separately.

Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Chemicals Standards Policy Committee (CIC/-) to Technical Committee CIC/2, upon which the following bodies were represented:

- Chemical Industries Association
- Ministry of Defence
- Royal Society of Chemistry
- Society of British Aerospace Companies Limited
- Society of Environmental Engineers

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Foreword

This Part of BS 3482 has been prepared under the direction of the Chemicals Standards Policy Committee. This revision of BS 3482 comprises Part 1, which describes procedures for sampling and preparation and storage of test samples and a number of Parts describing methods of test for desiccants. This revision supersedes BS 3482:1962 which is withdrawn. It differs from BS 3482:1962 in that individual methods have been published in separate Parts and have been generally updated. Some additional methods not included in BS 3482:1962 have also been incorporated.

This Part of BS 3482 also supersedes the methods given in Appendix H of BS 2540:1960, Appendix H of BS 2541:1960 and Appendix G of BS 3523:1962.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 and 2, an inside back cover 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.

1 Scope

This Part of BS 3482 describes a method for the determination of the friability and dust content of desiccants.

NOTE The titles of the publications referred to in this standard are listed on the inside back cover.

2 Principle

A test portion of the desiccant is shaken vigorously in a horizontal plane on a sieve during which time any dust or small particles due to attrition will pass through the mesh and be collected. The resulting dust is expressed as a percentage by mass of the original test portion.

3 Apparatus

3.1 Test sieve, 200 mm in diameter with a mesh size of 125 μm , fitted with a top and receiver, complying with BS 410.

3.2 Mechanical shaker, capable of shaking the test sieve in a horizontal plane at a frequency of 270 cycles per minute to 280 cycles per minute with an amplitude of 20 mm.

4 Procedure

4.1 Test portion

Weigh, to the nearest 1 g, 100 g of the laboratory sample (see clause 2 of BS 3482-1:1991) (m_1) on to the test sieve (3.1).

4.2 Agitation

Secure the test sieve (3.1) and the test portion (4.1) in the shaker (3.2), switch on the shaker and leave for 10 min.

4.3 Determination

Remove the test sieve (3.1) from the shaker (3.2) and weigh to the nearest 0.01 g any material which has passed through the sieve into the receiver (m_2).

5 Calculation and expression of results

The friability and dust level is defined as the material left in the receiver (m_2) and is calculated as a percentage by mass of the original test portion (4.1) using the following expression:

$$\frac{m_2}{m_1} \times 100$$

where

m_2 is the mass of dust collected in the receiver (in g);

m_1 is the original mass of test portion (in g).

6 Test report

The test report shall include the following information.

- A complete identification of the sample.
- A reference to this British Standard method, i.e. BS 3482-11:1991.
- The results expressed in accordance with clause 5.
- Any unusual features noted during the determination.

Publication(s) referred to

BS 410, *Specification for test sieves*.

BS 3482, *Methods of test for desiccants*.

BS 3482-1, *Sampling, and preparation and storage of samples*.

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