BRITISH STANDARD

BS EN ISO
787-5:1995

Incorporating
Amendment No. 1

General methods of test for pigments and extenders —

Part 5: Determination of oil absorption value

This part should be read in conjunction with the General Introduction to BS 3483 issued separately.

The European Standard EN ISO 787-5:1995 has the status of a British Standard

ICS 87.060.10;87.060.30

This British Standard, having been prepared under the direction of the Pigments, Paints and Varnishes Standards Committee, was published under the authority of the Board of BSI and comes into effect on 30 November 1982

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The following BSI references relate to the work on this standard:
Committee reference PVC/1
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Amendments issued since publication

Amd. No.	Date of issue	Comments
8687	December 1995	Indicated by a sideline in the margin

Contents

National foreword

This revision of Part B7 of BS 3483 has been prepared under the direction of the Pigments, Paints and Varnishes Standards Committee. It is identical with ISO 787-5 "*General methods of test for pigments and extenders — Part 5: Determination of oil absorption value*" published in 1980 by the International Organization for Standardization (ISO). This Part of BS 3483 supersedes BS 3483-B7:1974 which is withdrawn.

In 1995 the European Committee for Standardization (CEN) accepted ISO 787-5:1980 as European Standard EN ISO 787-5:1995. As a consequence of implementing the European Standard this British Standard is renumbered as BS EN ISO 787-5.

Terminology and conventions. The text of the International Standard has been approved 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 "This part of ISO 787" and "International Standard" appear, referring to this standard, they should be read as "This Part of BS 3483" and "British Standard" respectively.

Cross-references

International Standard	Corresponding British Standard
ISO 842:1974	BS 4726:1971 *Methods for sampling raw materials for paints and varnishes* (Technically equivalent)

The Technical Committee has reviewed the provisions of ISO 150 and ISO/R 385, to which references are made in the text, and has decided that they are acceptable for use in conjunction with this standard.

Related British Standards for ISO 150:1980 are BS 242, BS 243, BS 259, BS 632:1969 "*Linseed oil*". A related British Standard for ISO/R 385 was BS 846:1962.

Additional information. In clause **7** of ISO 787-5:1980 it is stated that duplicate determinations are to be carried out, but no indication is given of the acceptable difference between the two results. In implementing this standard in the United Kingdom, it is recommended that the result of the test [clause **9** c)] should be reported as the mean of the two determinations and that, if the determinations differ by more than 10 % of the mean, wherever possible both the sampling (clause **6**) and the procedure (clause **7**) should be repeated.

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.

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 ISO title page, pages 2 to 4, 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.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN ISO 787-5

August 1995

ICS 87.060.10; 87.060.30

Descriptors: Paints, pigments, tests, density measurement, pyknometric analysis, test equipment, pyknometers

English version

General methods of test for pigments and extenders — Part 5: Determination of oil absorption value

(ISO 787-5:1980)

Méthodes générales d'essai des pigments et matières de charge — Partie 5: Détermination de la prise d'huile
(ISO 787-5:1980)

Allgemeine Prüfverfahren für Pigmente und Füllstoffe — Teil 5: Bestimmung der Ölzahl
(ISO 787-5:1980)

This European Standard was approved by CEN on 1995-03-23. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart 36, B-1050 Brussels

Foreword

The text of the International Standard from ISO/TC 35, Paints and varnishes, of the International Organization for Standardization (ISO) has been taken over as a European Standard by the Technical Committee CEN/TC 298, Pigments and extenders.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by February 1996, and conflicting national standards shall be withdrawn at the latest by February 1996.

According to CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Contents

0 Introduction

This document is a part of ISO 787, *General methods of test for pigments and extenders.*

1 Scope and field of application

This part of ISO 787 specifies a general method of test for determining the oil absorption value of a sample of pigment or extender. The oil absorption value is usually required to be compared with the value determined at the same time on an agreed sample of the product.

NOTE When this general method is applicable to a given pigment or extender, only a cross-reference to it should be included in the International Standard relating to that pigment or extender, with a note of any detailed modification which may be needed in view of the special properties of the material in question. Only when this general method is not applicable to a particular material should a special method for determination of oil absorption value be specified.

2 References

ISO 150, *Raw, refined and boiled linseed oil for paints and varnishes — Specifications and methods of test.*

ISO/R 385, *Burettes.*

ISO 842, *Raw materials for paints and varnishes — Sampling.*

3 Definition

For the purpose of this International Standard, the following definition applies.

oil absorption value

the quantity of refined linseed oil that is absorbed under defined conditions by a sample of pigment or extender

NOTE The oil absorption value may be expressed either on a volume/mass basis or on a mass/mass basis.

4 Reagent

Refined linseed oil, complying with the requirements of ISO 150, and having an acid value of 5,0 to 7,0 mg KOH per gram.

5 Apparatus

5.1 *Plate*, of ground glass or marble, at least 300 mm × 400 mm.

5.2 *Palette knife*, with a tapered steel blade of the approximate dimensions 140 to 150 mm long, 20 to 25 mm wide at its widest point and not less than 12,5 mm wide at its narrowest point.

5.3 *Burette*, of capacity 10 ml, complying with the requirements of ISO/R 385.

5.4 *Balance*, with an appropriate accuracy.

6 Sampling

Take a representative sample of the material to be tested as described in ISO 842.

7 Procedure

[1)]Carry out the determination in duplicate.

7.1 Test portion

Weigh the appropriate quantity of the sample in accordance with the expected oil absorption value as indicated in the Table below.

Table

Expected oil absorption value ml/100 g	**Mass of the test portion** g
less than 10	20
10 to 30	10
30 to 50	5
50 to 80	2
over 80	1

7.2 Determination

Place the test portion (**7.1**) on the plate (**5.1**). Add the linseed oil slowly, 4 or 5 drops at a time, from the burette (**5.3**). After each addition, rub the oil into the product with the palette knife (**5.2**), and continue the addition of oil at this rate until conglomerates of oil and product are formed. From this point, add the oil 1 drop at a time and follow each addition of oil by thoroughly rubbing with the palette knife. Cease the addition of oil when a paste of smooth consistency has been formed. This paste should just spread without cracking or crumbling and should only just adhere to the plate.

Read the burette and note the quantity of oil used. The time taken for the complete operation should be between 20 and 25 min and during this time, the whole product mass shall be manipulated with maximum effort by the operator.

Where a comparison is required with the oil absorption value of an agreed sample of product, repeat the test in exactly the same way using the agreed sample.

[1)] See the paragraph headed “Additional information” in the national foreword.

8 Expression of results

The oil absorption value, expressed either in millilitres of oil per 100 g of product or in grams of oil per 100 g of product, is given respectively by formulae (1) and (2):

$$\frac{100\ V}{m} \quad \ldots (1)$$

$$\frac{93\ V}{m} \quad \ldots (2)$$

where

V is the volume, in millilitres, of oil required;

m is the mass, in grams, of the test portion.

Report the result to the nearest millilitre per 100 g or gram per 100 g.

9 Test report

The test report shall contain at least the following information:

a) the type and identification of the product tested;

b) a reference to this International Standard (ISO 787-5) or to a corresponding national standard;

c) the result of the test as indicated in clause **8**;

d) any deviation, by agreement or otherwise, from the procedure specified;

e) the date of the test.

Publications referred to

See the national foreword.

BSI — British Standards Institution

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British Standards are updated by amendment or revision. Users of British Standards should make sure that they possess the latest amendments or editions.

It is the constant aim of BSI to improve the quality of our products and services. We would be grateful if anyone finding an inaccuracy or ambiguity while using this British Standard would inform the Secretary of the technical committee responsible, the identity of which can be found on the inside front cover. Tel: 020 8996 9000. Fax: 020 8996 7400.

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