BRITISH STANDARD

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ISO 787-21: 1979

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Methods for

Testing pigments for paints —

Part C8: Comparison of heat stability

[ISO title: General methods of test for pigments and extenders — Part 21: Comparison of heat stability of pigments using a stoving medium]

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

UDC 667.622:535.682

National foreword

This revision of Part C8 of BS 3483 has been prepared under the direction of the Pigments, Paints and Varnishes Standards Committee. It is identical with ISO 787-21 "*General methods of test for pigments and extenders — Part 21: Comparison of heat stability of pigments using a stoving medium*" published in 1979 by the International Organization for Standardization (ISO). The 1974 edition of Part C8 is now withdrawn.

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

In **1.1** "This part of ISO 787" should be read as "This Part of BS 3483".

Cross-references

International Standard	Corresponding British Standard
ISO 842:1974	BS 4726:1971 *Methods for sampling raw materials for paints and varnishes* (Technically equivalent)
ISO 3668:1976	BS 3900 *Methods of test for paints* Part D1:1978 *Visual comparison of the colour of paints* (Identical)

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This British Standard, having been prepared under the direction of the Pigments, Paints and Varnishes Standards Committee, was published under the authority of the Executive Board and comes into effect on 31 July 1980

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The following BSI references relate to the work on this standard:
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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.

Amendments issued since publication

Amd. No.	Date of issue	Comments

Content

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0 Introduction

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

Although the method as written is intended for comparing the heat stability of pigments by specifying the temperatures of heating and the time of heating, it may also be used for determining the heat resistance of a pigment.

1 Scope and field of application

This part of ISO 787 specifies a general method of test for comparing the heat stability of the pigment under test against that of an agreed sample.

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

2 References

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

ISO 3668, *Paints and varnishes — Visual comparison of the colour of paints.*

3 Apparatus and materials

3.1 *Panels*

Any suitable light-gauge metal panels, for example of bright tinplate or aluminium, conveniently 150 mm × 100 mm, the surfaces of which have been cleaned and lightly abraded, or other suitable panels as agreed between the interested parties.

3.2 *Agreed stoving medium*

3.3 *Oven*, well ventilated and capable of being maintained at the agreed temperature.

4 Sampling

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

5 Procedure

Prepare a dispersion of the pigment under test (alone or reduced to an agreed colour) in the agreed storing medium by a suitable method to be agreed between the interested parties, including dilution of the dispersion to an appropriate consistency by further addition of the agreed medium or solvent.

Prepare a dispersion of the agreed sample in the same manner in the same medium.

Apply the dispersion of the pigment under test by an agreed method over the whole surface of a test panel, to give a wet film thickness of 75 to 120 μm. Apply the dispersion of the agreed sample in the same manner to the whole surface of another panel.

Allow the coated panels to remain at 23 ± 2 °C and (50 ± 5) % relative humidity for 30 min and then cut each panel into a suitable number of strips, each not less than 30 mm wide, to carry out the required tests, labelling each strip.

Stove one strip of each panel for an adequate period at the lowest temperature that will ensure full curing of the film.

NOTE These panels are the standards against which other panels will be compared.

Stove other strip(s) of the panels coated with the test sample and agreed sample respectively at the temperature(s) and for the time(s) agreed between the interested parties.

Allow the panels to cool to room temperature.

By the procedure described in ISO 3668, compare in diffuse daylight the panels stoved at the higher temperature(s) of both the test sample and the agreed sample with the corresponding standard panels stoved at the minimum temperature. If daylight is not available, make the comparison in artificial daylight.

If required, the comparison shall be repeated after 48 h.

Note the degree of colour change of the pigment under test as being less than, equal to, or greater than the colour change of the agreed sample, stating for how long and at what temperature the particular panels were stoved.

NOTE If required and agreed, a suitable colorimeter may be used for measuring the colour differences, in which case ensure that the panel is sufficiently large to permit the cutting of strips which are not distorted.

6 Test report

The test report shall include at least the following information:

a) the type and identification of the pigment under test;

b) a reference to this International Standard or to a corresponding national standard;

c) the details of items agreed between the interested parties, including pigment concentration, reference pigment used, medium used, method of application and curing conditions of the test films;

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

e) whether the comparison was made in natural or artificial daylight;

f) the result of the test: heat stability (characterized by colour change) less than, equal to, or greater than that of the agreed sample of pigment;

g) the date of the test.

Publications referred to

See national foreword.

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