BRITISH STANDARD

BS 217:1961

Specification for

Red lead for paints and jointing compounds

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Co-operating organizations

The Pigments, Paints and Varnishes Industry Standards Committee, under whose supervision this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

Admiralty*
Air Ministry
Association of British Chemical Manufacturers*
Board of Trade
British Colour Makers' Association*
British Railways, The British Transport Commission
Building Industry Distributors
Crown Agents for Oversea Governments and Administrations*
D.S.I.R. — Building Research Station*
D.S.I.R. — Laboratory of the Government Chemist
Incorporated Institute of British Decorators*
Lead Oxide Convention*
London County Council
Ministry of Aviation
Ministry of Works*
Oil and Colour Chemists' Association*
Paint Manufacturers' and Allied Trades Association*
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Research Association of British Paint, Colour and Varnish Manufacturers*
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Titanium Pigment Manufacturers' Technical Committee*
War Office*
White Lead Convention*
Zinc Development Association*
Zinc Pigment Development Association

The Government departments and scientific and industrial organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

British Barytes Producers' Association
British Electrical and Allied Manufacturers' Association
National Federation of Master Painters and Decorators of England and Wales
Individual manufacturers

This British Standard, having been approved by the Pigments, Paints and Varnishes Industry Standards Committee and endorsed by the Chairman of the Chemical Divisional Council, was published under the authority of the General Council on 23 June 1961

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The following BSI references relate to the work on this standard:
Committee references PVC/1, PVC/1/5
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Foreword

This standard makes reference to the following British Standards:

BS 242, *Refined linseed oil for paints.*

BS 245, *White spirit.*

BS 410, *Test sieves.*

BS 950, *Artificial daylight fittings for colour matching.*

BS 1733, *Flow cups and methods of use (for the consistency control of industrial materials such as paints and varnishes).*

BS 1752, *Sintered disk filters for laboratory use.*

This standard forms one of a series of British Standards for pigments. First issued as two standards, BS 217 and BS 315, issued in 1926 and 1927 respectively, it was revised in 1936 and 1952, and the present revision has been prepared as the result of a review of the standard in the light of present-day requirements.

Three types of red lead designated Type 1, Type 2 and Type 3 are specified, which correspond to the former Types C, A and B respectively and are now in order according to their Pb_3O_4 content. The principal changes from the previous specification involve the fixing of an upper limit for the Pb_3O_4 content of ordinary red lead for paints and the raising of the minimum Pb_3O_4 content of the non-setting variety. The opportunity has also been taken to clarify the wording of the appendices and to bring it into line with current conventions.

It should be noted that this standard covers the requirements for red lead for paints and jointing compounds only, and does not cover red lead for other purposes.

NOTE Where metric equivalents are stated the figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in BS 350, "*Conversion factors and tables*".

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, pages 1 to 6 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.

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1 Scope

This British Standard applies to red lead for use in paints and jointing compounds. For the purposes of this specification, three types of red lead are specified:

Type 1. Red lead, non-setting, for paints.
Type 2. Red lead, ordinary, for paint intended to be mixed on the site and used soon afterwards.
Type 3. Red lead for jointing purposes.

2 Composition

The material shall consist of red lead in the form of a dry soft powder, free from added colouring matter and other adulterants. After being dried as described in Appendix H, the material shall contain not less than 99.5 per cent by weight of oxides of lead (i.e. Pb_3O_4 + PbO), as determined in Appendix C.

The proportions of Pb_3O_4 in the material, determined by the method described in Appendix A, shall be as follows:

Type 1. Not less than 95.0 per cent by weight of Pb_3O_4 (equivalent to 33.2 per cent of PbO_2).
Type 2. Not less than 72.0 per cent by weight of Pb_3O_4 (equivalent to 25.1 per cent of PbO_2) and not more than 90.0 per cent by weight of Pb_3O_4 (equivalent to 31.4 per cent of PbO_2).
Type 3. Not less than 43.0 per cent by weight of Pb_3O_4 (equivalent to 15.0 per cent of PbO_2), and not more than 72.0 per cent by weight of Pb_3O_4 (equivalent to 25.1 per cent of PbO_2).

3 Non-setting properties for Type 1 material only

When Type 1 red lead is tested in the manner given in Appendix D, the paint produced shall not thicken to an extent that prevents it being brought, by simple mixing with a paddle, to a proper consistency for painting.

4 Residue on sieve

The material shall not leave a residue in excess of the following limits, when tested in the manner described in Appendix E:

Type 1. 0.1 per cent by weight on a 100 mesh BS test sieve[a].
0.75 per cent by weight on a 240 mesh BS test sieve[a].

Types 2 and 3. 0.5 per cent by weight on a 100 mesh BS test sieve[a].
1.5 per cent by weight on a 240 mesh BS test sieve[a].

[a] BS 410, "*Test sieves*".

5 Oil absorption value

The oil absorption value of the material, when determined in the manner described in Appendix F, shall be within ± 10 per cent of the oil absorption value of an agreed sample.

NOTE The oil absorption value of normal commercial grades of red lead is usually between 4 and 10.

6 Colour

The colour of the material shall closely match that of an agreed sample, when compared in the manner described in Appendix G.

7 Matter volatile at 100 °C

The loss in weight on heating the material in the manner described in Appendix H shall not exceed 0.2 per cent by weight.

8 Matter soluble in water

The material, when tested in the manner described in Appendix J, shall contain not more than 0.3 per cent by weight of matter soluble in water.

9 Sample

For the purpose of examination under this specification, representative samples shall be taken at random from not less than 10 per cent of the original and previously unopened containers. The material shall be thoroughly mixed and shall then be divided into triplicate samples weighing not less than 1 lb (450 g) each. These shall be packed in clean, dry, airtight, metal or dark glass containers. Each container shall be of such size that it is nearly filled by the sample. Each sample container so filled shall be sealed and shall be marked with full details and date of sampling.

10 Agreed sample

Except where otherwise agreed between purchaser and vendor, the agreed sample, referred to in Clauses **5** and **6**, shall be the same sample and shall comply in all respects with the requirements of this specification. The sample shall weigh not less than 1 lb (450 g) and shall be packed in the manner specified in Clause **9**.

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