

Specification for

Limestone for making colourless glasses

UDC 666.123.32:622.355.11

Confirmed November 2011

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Cooperating organizations

The Laboratory Apparatus Standards Committee, under whose direction this British Standard was prepared, consists of representatives from the following Government departments and scientific and industrial organizations:

- Agricultural Research Council
- Association for Science Education
- British Educational Equipment Association
- British Laboratory Ware Association
- British Lampblown Scientific Glassware Manufacturers' Association Ltd.
- British Pharmacopoeia Commission
- Chemical Industries Association
- Chemical Society
- Chemical Society, Analytical Division
- Department of Health and Social Security
- Department of Industry (Laboratory of the Government Chemist)
- Glass Manufacturers' Federation
- Institute of Petroleum
- Ministry of Defence
- Pharmaceutical Society of Great Britain
- Scientific Instrument Manufacturers' Association
- Society of Chemical Industry
- Society of Glass Technology*
- Standardization of Tar Products Tests Committee

The organization marked with an asterisk in the above list was directly represented on the committee entrusted with the preparation of this British Standard.

This British Standard, having been prepared under the direction of the Laboratory Apparatus Standards Committee, was published under the authority of the Executive Board and comes into effect on 30 September 1980

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First published March 1959
First revision September 1980

The following BSI references relate to the work on this standard:
Committee reference LBC/32
Draft for comment 75/52658 DC

ISBN 0 580 11395 7

Amendments issued since publication

Amd. No.	Date of issue	Comments
3600	April 1981	Indicated by a sideline in the margin

Contents

	Page
Cooperating organizations	Inside front cover
Foreword	ii
1 Scope	1
2 References	1
3 Sampling	1
4 Chemical composition	1
Appendix A Method of inspection for contamination	2
Appendix B Methods of sampling	2
Appendix C Methods for the determination of chemical composition	2
Appendix D Recommendations for the requirements to be agreed between the purchaser and supplier and recommended declarations to be made by the supplier	8
Appendix E Determination of moisture content	8
Appendix F Determination of size grading (sieve analysis)	8
Publications referred to	Inside back cover

Foreword

This British Standard has been prepared under the direction of the laboratory Apparatus Standards Committee in close cooperation with the Society of Glass Technology (SGT). The Society of Glass Technology has been concerned for many years with the standardization of the methods of chemical analysis of glass and of the raw materials and refractories used in its manufacture. The Society published a specification for limestone for making colourless glasses in 1937¹⁾, and revisions of the specification appeared in 1943²⁾, 1956³⁾ and 1972⁴⁾. The 1956 revision was used as the basis of the first edition of this British Standard, published in 1959, and the 1972 revision was used as the basis for the present British Standard. This British Standard supersedes BS 3108:1959, which is therefore withdrawn.

The SGT specification includes general recommendations for the inspection of a sample of the limestone for obvious impurities such as magnetic materials or unusual mineral formations. No limits are specified for these items and they have therefore not been included as a mandatory part of the present standard; nevertheless, for the information of users, the inspection methods recommended by the SGT are given in Appendix A.

Certain requirements for the composition of the limestone are not specified in this standard and are subject to agreement between purchaser and supplier; recommended agreements between purchaser and supplier for these requirements and recommended declarations by the supplier are given in Appendix D.

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 8, 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⁾ *J.Soc. Glass Tech.*, **21** (1937), 111 – 119.

²⁾ *ibid.*, **29** (1943), 140 – 149.

³⁾ *ibid.*, **40** (1956), 130 – 139.

⁴⁾ *Glass Technology*, **13** (1972), 104 – 109.

1 Scope

This British Standard specifies the essential requirements and methods of test for limestone for making colourless glasses, i.e. glass that has no appreciable tint when viewed through the thickness normally encountered in practice.

2 References

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

3 Sampling

A representative sample of the material shall be obtained for each test by the appropriate method specified in Appendix B.

4 Chemical composition

The chemical composition of the sample when analysed by the methods specified in Appendix C shall comply with the following requirements.

- a) The calcium content, expressed as calcium oxide (CaO), shall be not less than 55.2 %.

NOTE This is equivalent to a calcium carbonate content of 98.5 %.

- b) The total iron content, expressed as ferric oxide (Fe_2O_3), shall not exceed 0.035 %.

- c) The total non-volatile matter insoluble in hydrochloric acid shall not exceed 1.0 %.

- d) The organic matter shall not exceed 0.1 %.

- e) Colouring elements, other than iron, shall not be present to an extent sufficient to produce a colour in the glass.