

Specification for
Hard soap

Confirmed
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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/34, upon which the following bodies were represented:

Chemical Industries Association
 Chemical Industries Association (GOSIP)
 Consumer Policy Committee of BSI
 Department of Trade and Industry (Laboratory of the Government Chemist)
 Ministry of Defence
 Royal Society of Chemistry
 Soap and Detergent Industry Association
 Society of Dyers and Colourists

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

This revision of BS 1911 has been prepared under the direction of the Chemicals Standards Policy Committee. It supersedes the 1985 edition of BS 1911, which is withdrawn and from which it differs principally in that the references to test methods have been changed to take account of the partial revision of BS 1715:1963, and that the requirement for rosin acids content has been deleted.

This British Standard is one of a series dealing with various kinds of soap. Other standards in the series are as follows:

BS 1545, *Specification for liquid toilet soap.*

BS 1912, *Specification for soap flakes.*

BS 1913, *Specification for soft soap.*

BS 1914, *Specification for toilet soap.*

BS 4405, *Specification for liquid soap.*

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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 British Standard specifies requirements and gives corresponding test methods for hard soap for domestic purposes, such as is supplied in tablets or bars to the general public.

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

2 Properties

2.1 The content of hard soap shall be as given in Table 1. Compliance shall be checked by the methods given in Table 1 using analysis samples prepared as described in BS 1715-1.

2.2 In the case of the properties listed in items 2 to 6 of Table 1, the actual results obtained by the specified methods of test shall be recalculated in relation to the specified minimum total fatty matter (see Table 1, item 1) by means of the following equation:

Recalculated result =

$$\text{Actual result} \times \frac{\text{Specified minimum total fatty matter content}}{\text{Actual total fatty matter content}}$$

NOTE Recalculation of the results is necessary because hard soaps are liable to lose moisture on keeping.

Table 1 — Properties and test methods

Property	Content	Test method
	% (<i>m/m</i>)	
1. Total fatty matter content min.	62	Described in BS 1715-2.1
2. Unsaponified saponifiable matter content max.	0.2	Described in BS 1715-2.5
3. Ethanol-insoluble matter content max.	2.0	Described in BS 1715-2.11
4. Total free alkali content (Na ₂ O) max.	0.25	Described in BS 1715-2.2 and Appendix A of this standard
5. Free caustic alkali content (Na ₂ O) max.	0.05	Described in BS 1715-2.3 and Appendix B of this standard
6. Chloride content (NaCl) max.	1.25	Described in BS 1715-2.7

Appendix A Determination of total free alkali content

Use the method described in BS 1715-2.2 except that the calculation and formulae given in 9.1 of BS 1715-2.2:1989 should be replaced by the following.

The total free alkali content, expressed as a percentage by mass of Na₂O, is given by the formula:

$$0.031 \times \frac{V_0 T_0 - V_1 T_1}{m} \times 100$$

where

- m is the mass of the test portion (in g);
- V_0 is the volume of the sulphuric acid solution (see 5.2 of BS 1715-2.2:1989) used in the determination (in mL);
- V_1 is the volume of the potassium hydroxide solution (see 5.3 of BS 1715-2.2:1989) used in the titration (in mL);
- T_0 is the exact amount-of-substance concentration of the sulphuric acid solution (see 5.2 of BS 1715-2.2:1989) (in mol/L);
- T_1 is the exact amount-of-substance concentration of the potassium hydroxide solution (see 5.3 of BS 1715-2.2:1989) used in the titration (in mol/L).

Appendix B Determination of free caustic alkali content

Use method A described in BS 1715-2.3 except that the calculation and formula given in 4.5.1 of BS 1715-2.3:1989 should be replaced by the following.

The free caustic alkali content, expressed as a percentage by mass of Na₂O, is given by the formula:

$$0.031 \times \frac{VT}{m} \times 100$$

where

- m is the mass of the test portion (in g);
- V is the volume of the ethanolic hydrochloric acid solution (see 4.2.3 of BS 1715-2.3:1989) used (in mL);
- T is the amount-of-substance concentration of the ethanolic hydrochloric acid solution (see 4.2.3 of BS 1715-2.3:1989) used (in mol/L).

Publications referred to

BS 1545, *Specification for liquid toilet soap*¹⁾.

BS 1715, *Analysis of soaps*.

BS 1715-1, *General introduction, sampling, and test for presence of synthetic anionic-active surface active agents*.

BS 1715-2.1, *Method for determination of total alkali content and total fatty matter content*.

BS 1715-2.2, *Method for determination of total free alkali content*.

BS 1715-2.3, *Method for determination of free caustic alkali content*.

BS 1715-2.5, *Method for determination of unsaponifiable, unsaponified and unsaponified saponifiable matter contents*.

BS 1715-2.7, *Method for determination of chloride content*.

BS 1715-2.11, *Method for determination of ethanol-insoluble matter content*.

BS 1912, *Specification for soap flakes*¹⁾.

BS 1913, *Specification for soft soap*¹⁾.

BS 1914, *Specification for toilet soap*¹⁾.

BS 4405, *Specification for liquid soap*¹⁾.

¹⁾ Referred to in the foreword only.

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