SRI LANKA STANDARD 38 : 2009

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SPECIFICATION FOR LAUNDRY SOAP POWDERS, FLAKES AND CHIPS

(Second Revision)

SRI LANKA STANDARDS INSTITUTION

Sri Lanka Standard
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SLS 38 : 2009

Gr. 5

SRI LANKA STANDARDS INSTITUTION
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Sri Lanka Standards are subject to periodical revision in order to accommodate the progress made by industry. Suggestions for improvement will be recorded and brought to the notice of the Committees to which the revisions are entrusted.

This standard does not purport to include all the necessary provisions of a contract.

Sri Lanka Standard
SPECIFICATION FOR LAUNDRY SOAP POWDERS, FLAKES AND CHIPS
(Second Revision)

FOREWORD

This Sri Lanka Standard was approved by the Sectoral Committee on Chemical and Polymer Technology and was authorized for adoption and publication as a Sri Lanka Standard by the Council of the Sri Lanka Standards Institution on 2009-11-30.

This specification was first published in 1968, and first revised in 1982 to cover requirements for laundry soap powders, flakes and chips. In this Second Revision, test methods specified in ISO standards have been introduced under the methods of test and additional marking requirements have been included. The requirement for pH has been specified.

This specification is subject to the restrictions imposed under the Consumer Affairs Authority Act No. 09 of 2003 and the Regulations framed there under.

For the purpose of deciding whether a particular requirement of this specification is complied with, the final value, observed or calculated, expressing the result of a test or an analysis, shall be rounded off in accordance with **SLS 102**. The number of significant places retained in the rounded off value shall be the same as that of the specified value in this specification.

In the preparation of this specification, the assistance obtained from the following publications is gratefully acknowledged :

BS 1912 : 1990	British Standard Specification for Soap flakes
IS 2887 : 1993	Indian Standard Laundry soap powders / flakes – Specification

1 SCOPE

This specification prescribes the requirements, methods of sampling and methods of test for laundry soap powders, flakes and chips used for laundry, hand washing or washing machines.

2 REFERENCES

ISO 456 Surface active agents – Analysis of soaps – Determination of free caustic alkali
ISO 457 Soaps – Determination of chloride content – Titrimetric method
ISO 673 Soaps – Determination of content of ethanol – insoluble matter
ISO 672 Soaps – Determination of moisture and volatile matter content – Oven method
ISO 685 Analysis of soaps – Determination of total alkali content and total fatty matter content
ISO 1067 Analysis of soaps – Determination of unsaponifiable, saponified and unsaponified saponifiable matter
SLS 102 Rules for rounding off numerical values
SLS 428 Random sampling methods
SLS 1348 Good manufacturing practices (GMP) for cleansing materials

3 TYPES

There shall be two types of laundry soap powders, flakes or chips, namely:

3.1 Type 1 - Pure laundry soap powders, flakes or chips **:** Pure soap base in the form of powders, flakes or chips.

3.2 Type 2 - Built laundry soap powders, flakes or chips **:** Soap base in combination with detergents, in the form of powders, flakes or chips and free from substances commonly known as or intended to act as inert fillers.

4 REQUIREMENTS

4.1 General requirement

4.1.1 Laundry soap powders, flakes and chips shall be a well saponified product, uniform in colour, and free from dirt and other foreign matter. It shall be free from any objectionable odour and shall not develop any objectionable odours during storage within the declared shelf life.

4.1.2 Laundry soap powders, flakes and chips shall be freely soluble in water without the formation of insoluble or partially soluble aggregates and shall possess good lathering properties.

4.1.3 Laundry soap powders, flakes and chips shall be manufactured by a process adhering to Good Manufacturing Practices (GMP) complying with **SLS 1348**.

4.1.4 Laundry soap powders, flakes and chips shall meet performance and stability specifications given by the manufacturer based on in-vitro studies for the complete duration of the declared shelf life. The date of expiry / best before / shelf life of the finished product shall be determined based on the results of the stability.

4.1.5 Name of detergent used shall be declared, if any detergent is used.

4.2 Other requirements

4.2.1 Laundry soap powders, flakes and chips shall comply with the requirements given in Table **1**, when tested according to the relevant methods given in Column (**5)** of the table.

4.2.2 Laundry soap powders, flakes and chips containing more than 25.0 per cent moisture and matter volatile at 105 ^{0}C shall be rejected without further test.

TABLE 1 - Requirements for laundry soap powders, flakes and chips

Sl. No.	Characteristic	Requirement		Method of test
		Type 1	Type 2	
(1)	(2)	(3)	(4)	(5)
i)	Total fatty matter, per cent by mass, min.	80.0	40.0	ISO 685
ii)	Free caustic alkali, calculated as NaOH, per cent by mass, max.	0.05	0.1	ISO 456
iii)	Matter insoluble in ethanol, per cent by mass, max.	2.0	25.0	ISO 673
iv)	Chlorides content calculated as NaCl, per cent by mass, max.	1.6	1.6	ISO 457
v)	Moisture and matter volatile at 105 ^{0}C, per cent by mass, max.	5.0	25.0	ISO 672
vi)	Unsaponified matter and unsaponifiable matter, per cent by mass, max.	2.0	2.0	ISO 1067
vii)	pH at 27 ± 2 ^{0}C, min.	8.0	8.0	Appendix B

NOTE : *Laundry soap powder, flakes or chips may contain synthetic surface active ingredients which improve its performance.*

5 PACKAGING AND MARKING

5.1 Laundry soap powders, flakes and chips shall be packed in suitable containers as agreed to between the purchaser and the supplier. Each container shall be securely closed and marked legibly and indelibly with the following :

a) Name and type of the product as "Pure laundry soap powder, flakes or chips" or "Built laundry soap powder, flakes or chips" ;
b) Name and address of the manufacturer including country of origin (**NOTE***: Name and address of the manufacturer and the distributors need to be marked on imported products) ;*
c) Registered trade mark, if any ;
d) Brand name, if any ;
e) Net mass in grams at declared total fatty matter (TFM) ;
f) Batch or code or lot identification number (**NOTE :** *Date of manufacture may be used as the batch no. /lot identification no. / code no. if one batch is manufactured during the day.)* ;
g) Date of manufacture and Best before / shelf life ;
h) Specific warning statement or cautionary labeling on skin irritation where hand washing is applicable.; and
j) Directions for use of product according to the application recommended. (**NOTE** : i*nstructions for washing machine and/or hand washing should be provided in pictorial or written manner in an additional leaflet or on the same pack.*).

5.2 Where containers are packed in packages, each package shall be marked legibly and indelibly with the following :

a) Name and type of the product as "Pure laundry soap powder, flakes or chips" or "Built laundry soap powder, flakes or chips";
b) Name and address of the manufacturer including country of origin (**NOTE***: Name and address of the manufacturer and the distributors need to be marked on imported products)* ;
c) Registered trade mark, if any ;
d) Number of containers in each package ; and
e) Batch or code or lot identification number (**NOTE :** *Date of manufacture may be used as the batch no. /lot identification no. / code no. if one batch is manufactured during the day.).*

6 SAMPLING

Representative samples of laundry soap powders, flakes and chips for carrying out test shall be drawn as specified in Appendix **A**.

7 METHODS OF TEST

7.1 Tests shall be carried out as prescribed in Column (**4**) of Table **1**.

7.2 During the analysis, unless otherwise stated, use only reagents of recognized analytical grade and only distilled water or water of equivalent purity.

8 CALCULATION OF RESULTS

8.1 Laundry soap powders, flakes and chips are subject to fluctuations in moisture content on keeping. The results obtained by the specified methods of analysis shall therefore be recalculated in relation to the specified minimum total fatty matter by means of the equation :

$$\text{Recalculated result} = \text{Actual result} \times \frac{\text{Minimum specified total fatty matter}}{\text{Actual total fatty matter}}$$

8.1.1 In each of the characteristics (ii) to (vi) of Table **1** the requirement of the characteristic will be met if the recalculated result obtained as above is within the specified limit.

8.1.2 The mass of laundry soap powders, flakes and chips as agreed to between the purchaser and the supplier shall be recalculated from the equation.

$$\text{Recalculated mass of soap} = \text{Actual mass of soap} \times \frac{\text{Actual total fatty matter}}{\text{Declared total fatty matter}}$$

APPENDIX A
COMPLIANCE OF A LOT

The sampling scheme given in this Appendix should be applied where compliance of a lot to the requirements of this standard is to be assessed based on statistical sampling and inspection.

Where compliance with this standard, appropriate schemes of sampling and inspection shall be adopted based on manufacturer's control systems coupled with types, tests and testing procedures.

A.1 LOT

All containers of laundry soap powder, flakes or ships of the same mass and same type, manufactured with same lot of ingredients under relatively similar conditions of manufacture shall be grouped together to form a lot.

A.2 SCALE OF SAMPLING

A.2.1 Samples shall be tested from each lot separately for ascertaining the conformity of the soap to the requirements of this specification.

A.2.2 The number of containers to be selected from the lot shall depend on the size of the lot and shall be in accordance with Columns (**1)** and (**2)** of Table **2.**

A.2.3 Where the containers are packed in packages, the number of package to be selected for taking the required number of samples shall be half the number given in Column (**2)** of Table **2**. At least 2 containers shall be drawn from each package selected to form a sample.

A.2.4 The required number of containers, packages shall be chosen at random. A random number tables specified in **SLS 428** shall be used in order to ensure randomness of selection.

TABLE 2 -Scale of sampling

No. of containers in the lot (1)	No. of containers to be selected (2)	Acceptance no. (3)
Up to 100	4	0
101 to 500	8	0
501 to 1 000	12	1
1 001 to 5 000	16	1
5 001 and above	20	2

A.3 NUMBER OF TESTS

A.3.1 Each container selected as in **A.2.2** shall be inspected for marking (see **5.1**).

A.3.2 Each package selected as in **A.2.3** shall be inspected for marking (see **5.2**).

A.3.3 The mass of the contents of each container selected as in **A.2.2** shall be determined and recalculated as given in **8.1.2**.

A.3.3 Material from each container shall be mixed thoroughly, if the sample is lumpy, the lumps shall be broken down and mixed together to form a composite sample.

A.3.3.1 Tests for the requirements given in **4.2.1** shall be carried out on this composite sample.

A.4 CRITERIA FOR CONFORMITY

A lot shall be considered to be in conformity to the requirements of this specification if the following conditions are satisfied :

A.4.1 Each container inspected as in **A.3.1** satisfies the marking requirements.

A.4.2 Each package inspected as in **A.3.2** satisfies the marking requirements.

A.4.3 The number of defective container is less than or equal to the corresponding acceptance number given in Column (**3)** of Table **2**.

A.4.3.1 A defective is a container of which the recalculated mass of the contents determined as in **A.3.3** is less than the mass indicated on the container.

A.4.4 The composite sample tested as in **A.3.3.1** satisfies the relevant requirements.

APPENDIX B
DETERMINATION OF pH

B.1 APPARATUS AND REAGENTS

B.1.1 pH meter with a glass electrode.

B.1.2 Suitable buffer solutions

B.2 PROCEDURE

Determine the pH at a temperature of 27 ± 2^0 C. Mix 5 g of the sample with 45 ml of water and determine the pH of the resulting solution.

SRI LANKA STANDARDS INSTITUTION

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Printed at the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.

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