

**SRI LANKA STANDARD 624:1983**  
**UDC 675:685.312**

**SPECIFICATION FOR**  
**FULL-CHROME SHOE UPPER LEATHER**

**BUREAU OF CEYLON STANDARDS**



# SPECIFICATION FOR FULL-CHROME SHOE UPPER LEATHER

SLS 624:1983

Gr. 4

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BUREAU OF CEYLON STANDARDS

53, Dharmapala Mawatha,

Colombo 3,

Sri Lanka.



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**FOREWORD**

This Sri Lanka Standard Specification was authorized for adoption and publication by the Council of the Bureau of Ceylon Standards on 1983-12-20, after the draft, finalized by the Drafting Committee on Tanned Leather, had been approved by the Chemicals Divisional Committee.

All values in this specification are in SI units.

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 analysis shall be rounded off in accordance with CS 102. The number of significant places retained in the rounded off value should be the same as that of the specified value in this specification.

In the preparation of this specification, the assistance obtained from the publications of the British Standards Institution and the Indian Standards Institution is gratefully acknowledged.

**1 SCOPE**

1.1 This specification prescribes requirements, methods of sampling and tests for full-chrome shoe upper leathers.

1.2 This specification does not cover the requirements for shoe upper leathers manufactured from tannages other than full chrome and also excludes mouldable and patent upper leathers.

**2 REFERENCES**

- BS 1006 Colour fastness to circular rubbing of light leathers
- CS 102 Presentation of numerical values
- SLS 402 Sampling of leather
- SLS 403 Leather - Laboratory samples, location and identification
- SLS 404 Physical testing of leather

- SLS 537 Chemical testing of leather
- SLS ... Glossary of terms on leather (under preparation)
- SLS 623 Resistance of leather to surface fungal growth

### 3 DEFINITIONS

For the purpose of this specification the definitions given in SLS ... (under preparation) shall apply.

### 4 REQUIREMENTS

#### 4.1 Raw material

The raw material used shall be cattle hides or skins or goat skins.

#### 4.2 Tanning

The material shall be tanned with basic chromium salts. The material after tanning shall not shrink when tested in the wet blue stage, in boiling water, by the method prescribed in SLS 404:Part 7.

#### 4.3 Finishing

The leather shall be grain finished with the flesh side smooth. The material shall be trimmed free from nail or toggle marks in usable area along the edges and shanks. The grain side of the leather shall be tight.

#### 4.4 Fungicidal additives

4.4.1 At the end of the tanning operation and before drying, suitable fungicides shall be incorporated in the leather in required proportions. Fungicides used to improve mildew resistance in leather shall be effective and non-toxic.

4.4.2 Recommended fungicides are given in Appendix A.

#### 4.5 Physical requirements

The leather shall comply with the requirements given in Table 1.

#### 4.6 Chemical requirements

The leather shall comply with the requirements given in Table 2.

#### 4.7 Resistance to mildew growth

The leather shall show no growth of mildew when examined visually after the completion of the test prescribed in SLS 623.

TABLE 1 - Physical requirements

Sl. No. (1)	Characteristics (2)	Requirements (3)	Methods of test (4)
i	Thickness Tolerance on agreed thickness, mm	As agreed  ± 0.1	SLS 404:Part 1  -
ii	Resistance to grain cracking on single folding	shall not crack	
iii	Tensile strength, N/mm <sup>2</sup> , min.	20	SLS 404:Part 6
iv	Elongation at break, per cent	45-75	SLS 404:Part 6
v	Tear strength, N/mm, min.	45	SLS 404:Part 3
vi	Stitch tear strength, N/mm, min.	80	SLS 404:Part 9
vii	Colour fastness a) wet rubbing, min. b) dry rubbing, min.	20 500	BS 1006:1978 UK-LC

TABLE 2 - Chemical requirements

Sl. No. (1)	Characteristics (2)	Requirements (3)	Methods of test Ref. to Part No. of SLS 537 (4)
i	Solvent extractable substance, per cent by mass (dichloro- methane used as solvent)	3.0 to 7.0	4
ii	Hide substance, per cent by mass, min.	60	5
iii	Chromium (as Cr <sub>2</sub> O <sub>3</sub> ), per cent by mass, min.	3.0	7
iv	pH of water extract, min	3.5	2

NOTE - Calculations and requirements (i) to (iii) are based on zero per cent moisture basis.

## 5 PACKAGING

The leather shall be packed as agreed to between the buyer and the seller.

## 6 MARKING

6.1 Each individual piece of leather shall be marked legibly and indelibly with the following:

- a) Registered trade mark;
- b) Area, in  $\text{dm}^2$ ; and
- c) Thickness, in mm.

6.2 Where pieces of leather are contained in packages, each package shall be marked legibly and indelibly with the following:

- a) Manufacturer's name and address;
- b) Registered trade mark, if any;
- c) The words *Full-chrome shoe upper leather*;
- d) Number of pieces;
- e) Area, in  $\text{dm}^2$ ;
- f) Month and year of manufacture; and
- g) Thickness, in mm.

## 7 METHODS OF TEST

Tests for the requirements given in this specification shall be carried out as prescribed in Table 1, Table 2 and 4.7.

## 8 SAMPLING

8.1 The method of drawing representative samples of skins or hides from a lot shall be as specified in relevant clauses of SLS 402.

### 8.2 Sampling location

The location for taking test pieces from individual skins or hides when testing for physical and chemical requirements shall be as in SLS 403.

### 8.3 Number of tests

#### 8.3.1 *Physical requirements*

Each test piece in the sample shall be tested individually for all the physical requirements given in this specification.



### 8.3.2 *Chemical requirements*

If the lot has been found satisfactory in respect of physical requirements these shall be subjected to chemical tests. Each test piece in the sample shall be tested for all the chemical requirements.

### 8.3.3 *Microbiological requirements*

Four test pieces as described in SLS 623 shall be randomly drawn from samples selected as in 8.1. These shall be tested for mildew growth given in 4.7.

## 9 CONFORMITY TO STANDARD

The lot shall be declared as conforming to the requirements of this specification if the following conditions are satisfied.

9.1 Each test piece tested as in 8.3.1 and 8.3.2 satisfies the relevant requirements.

9.2 Each test piece tested as in 8.3.3 satisfies the mildew growth requirements.

## APPENDIX A

### RECOMMENDED FUNGICIDAL ADDITIVES

The use of 0.1 per cent of fungicidal additives on dry mass basis of the leather is recommended. The following fungicides are recommended as suitable.

- a) p-chloro-m-cresol;
- b) p-nitrophenol;
- c) Sodium penta-chlorophenate;
- d) Sodium trichlorophenate;
- e) p-naphthol;
- f) o-, m-, p-, cresol; and
- g) Sodium silicofluoride



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*The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI which includes surveillance inspection of the factory, testing of both factory and market samples.*

*Further particulars of the terms and conditions of the permit may be obtained from the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*



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