SRI LANKA STANDARD 368:1975
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# SPECIFICATION FOR INTERLININGS FOR SHIRTS

BUREAU OF CEYLON STANDARDS

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SLS 368:1975

Gr. 4

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

# SRI LANKA STANDARD
# SPECIFICATION FOR INTERLININGS FOR SHIRTS

**FOREWORD**

This Sri Lanka Standard Specification was prepared by the Drafting Committee of the Bureau on Interlinings. It was approved by the Textiles Divisional Committee of the Bureau of Ceylon Standards and was authorised for adoption and publication by the Council of the Bureau on 1975-12-03.

The basic materials for interlinings covered in this standard are woven fabrics. Non-woven type interlinings have not been covered in this standard.

All standard values given in this standard are in the International System of units. Equivalent values in the inch-pound system of units have also been given in brackets for guidance.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or observation shall be rounded off in accordance with CS 102*. The number of figures to be retained in the rounded off value shall be the same as that of the specified value in this standard.

In the preparation of this standard, assistance derived from publications of the Indian Standards Institution is gratefully acknowledged.

**CS 102 Presentation of numerical values.*

## 1 SCOPE

This standard specifies requirements, marking and packing of woven interlinings used on shirts for giving a stiffening effect to collars and cuffs as well as to provide additional strength.

## 2 TYPES

Three types of interlinings have been covered in this standard.

Type 1 - Cotton interlinings

Type 2 - Synthetic or blended interlinings

Type 3 - Fusible interlinings with cotton, synthetic or blended woven fabric as the base

*NOTE - For the manufacture of fusible interlinings, fabrics are coated with a film or are given sinter or spot application. In sinter type application sprinkling of sugar-like adhesive crystals over the fabric is done while in spot type a regular print of the fusible is made on the fabric. The principle involved is that the fusible melts on applying heat and pressure and forms a layer of fusible material between the base and outer fabric which solidifies on cooling.*

*The sinter type forms a film and this gives a slightly stiffer final product while the spot type gives a number of fused points and gives a final product which is flexible and hence permits better drape. Polyethylene or any other suitable synthetic or non-synthetic chemical is used as the fusible.*

## 3 REQUIREMENTS

### 3.1 General requirements

3.1.1 The interlinings shall be uniform in appearance.

When viewed through transmitted light the interlinings shall not show streaks, patches, blurs, etc.

3.1.2 Interlinings shall be free from prominent weaving defects like bars, floats and slubs. The interlinings shall not show warp-weft distortion.

3.1.3 The spot type shall have a smooth texture, and rubber-like feel. Sinter type fusible interlinings shall have granules uniformly spread on the surface.

3.1.4 In case of blended interlinings, the composition of the blend shall be stated.

3.1.5 Fusible interlinings when applied on the outer fabric under pressure at the required temperature as advised by the manufacturer shall not transmit the fusible material to the other side.

**3.2 Specific requirements**

The speciifc requirements for interlinings shall be as given in Table 1.

**3.3 Permanence of finish**

3.3.1 A collar or cuff shall be made from the interlinings. The collars or cuffs shall be subjected to washing treatment for 15 minutes with 1 per cent soap solution at 60 $^{o}$C thrice with intermediate dryings. Finally these shall be dried in air for 24 hours. These on testing,

a) shall not show any dimensional change more than 1 per cent.

b) shall not show any blisters, and

c) shall have bonding strength as specified in Table 1 (in the case of fusible interlinings).

TABLE 1 – Specific requirements of interlinings for shirts

| Serial No. | Characteristic | Type 1 | Type 2 | Type 3 | Method of test |
|---|---|---|---|---|---|
| 1 | Minimum number of threads per 10 mm (inch)<br>a) Warp<br>b) Weft | <br><br>17(44)<br>13(32) | <br><br>22(56)<br>19(48) | <br><br>43(108)<br>24(60) | <br><br>CS 41* |
| 2 | Mass in $g/m^2$ ($oz/yd^2$) | Light | 115 to 140 (3.4 to 4.0) | | |
| | | Medium | 170 to 190 (4.9 to 5.5) | | CS 42** |
| | | Heavy | 220 to 240 (6.4 to 7.0) | | |
| 3 | Minimum breaking load in daN (lbf)<br>a) Warp<br>b) Weft | <br><br>60(135)<br>50(112) | <br><br>80(180)<br>70(157) | <br><br>100(225)<br>90(202) | <br><br>CS 43† |
| 4 | Maximum dimensional change per cent | 1<br>-<br>- | -<br>1<br>- | -<br>-<br>1 | SLS .....+<br>CS 199 ++<br>CS 47 +++ |
| 5 | Minimum crease recovery angle | | 100 @ | | CS 200 @ |
| 6 | Minimum bond strength in daN (lbf)<br>a) Sinter & Spot type<br>b) Film type | <br>-<br>- | <br>-<br>- | <br>1.5(3.4)<br>2.0(4.5) | Appendix B and CS 43† |

* CS 41 Methods for the determination of the number of threads per inch in woven fabric.

** CS 42 Methods for determination of weight per unit length and per unit area of woven or knitted fabrics.

† CS 43 Methods for the determination of breaking load and extension of strips of woven textile fabric.

+ SLS .... Methods for determination of shrinkage on laundering (under preparation).

++ CS 199 Methods for determining the shrinkage on washing of woven rayon synthetic fibre fabrics.

+++ CS 47 Methods for shrinkage of fabrics : cold water immersion test.

@ CS 200 Method for the determination of recovery of fabrics from creasing.

### 3.4 Colour fastness

Coloured interlining material shall be fast to daylight, drycleaning, perspiration, rubbing and washing. The numerical ratings shall be in accordance with Table 2 when tested by the relevant methods given in Column 3 of the Table.

**TABLE 2 - Colour fastness requirements**

| Agent | Numerical rating | Method of test |
|---|---|---|
| Daylight | 5 or better | CS 62* |
| Dry-cleaning | 5 or better | SLS 416** |
| Perspiration | 4 or better | CS 67† |
| Rubbing | 4 or better | CS 63†† |
| Washing | 5 | CS 54‡ |

### 3.5 Starch content

When tested in accordance with the method given in Appendix A, the material shall be free from starch.

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*CS 62 *Method for the determination of colour fastness of textile materials to daylight.*

**SLS 416 *Method for the determination of colour fastness of textile materials to dry cleaning*

†CS 67 *Method for the determination of colour fastness of textile materials to perspiration.*

††CS 63 *Method for the determination of colour fastness of textile materials to rubbing.*

‡CS 54 *Method for the determination of colour fastness of textile materials to washing at 60 °C (Test 3).*

### 3.6 Width

The minimum width of interlinings of the types listed in Table 1 shall be 860 mm (34 in) or any other width as may have been specified in an agreement between the buyer and the seller.

The width of cloth shall be determined by the method prescribed in CS 46*.

### 3.7 Length

The length of each piece of interlining material shall be 23 m (25 yds) or any other length as may have been specified in an agreement between the buyer and the seller.

The length of cloth shall be determined by the method prescribed in CS 45**.

## 4 PACKING

4.1 Interlining material shall be packed in continuous length in roll form only, free from wrinkles. The material shall be packed in entirely enclosed packages, wrapped in suitable packaging material which does not adversely affect the interlining material and which protects it from contamination.

4.2 Packages obtained as in 4.1 may be packed in suitable bulk containers. Only interlinings of the same type shall be packed together in a bulk container.

## 5 MARKING

### 5.1 Packages

Each roll of interlining material shall be marked with

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*CS 46 *Method for the determination of width of woven or knitted fabric when relaxed at zero tension.*

**CS 45 *Method for the determination of length of woven or knitted fabric when relaxed at zero tension.*

the following information:

a) Type of material, composition in the case of blended interlinings and amount of fusible content in the case of fusible interlinings,
b) Manufacturer's name and/or trade mark,
c) Width and length,
d) Fusing instructions in the case of fusible interlinings,
e) Code or batch number of manufacture, and
f) Country of origin.

**5.2 Bulk containers**

Each bulk container shall be marked with the following information:

a) Information required in terms of 5.1, and
b) Quantity of packages.

**5.3 Additional marking**

When so required by the purchaser, packages and bulk containers shall bear information additional to those specified in 5.1 and 5.2.

**6 SAMPLING**

**6.1 lot:** In a consignment, interlining material of the same type manufactured in a single batch shall constitute a lot.

**6.2 selection of sample rolls for examination and testing:** The number of rolls to be sampled shall be in accordance with Table 3. All the selections shall be made at random. In order to ensure randomness of selection random number tables agreed to between the buyer and the seller shall be used. If such tables are not available, the following procedure shall be adopted.

If $n$ items (either cartons, bundles or rolls) are to be selected at random from a total of $N$ items, starting from any item count them as 1,2,3 etc. up to $r$ and

so on. Every 'rth' item thus counted shall be withdrawn for further sampling or testing the value of *r* being equal to the integral part of *N/n*.

If the rolls are packed in a number of bundles, and the bundles in turn are packed in cartons, the sample rolls shall be selected as follows. In the first instance at least 25 per cent of the cartons subject to a minimum of 2 shall be opened. From each selected carton equal numbers of bundles shall be taken at random so that the total sample bundle number is n/2. From each bundle two rolls shall be sampled at random to give the final sample size n.

TABLE 3 - Number of rolls to be chosen from a lot

| Lot size (N) | No. of rolls to be selected (n) |
|---|---|
| Up to 25 | 4 |
| 26 to 50 | 6 |
| 51 to 100 | 10 |
| 101 to 300 | 16 |
| 301 and above | 24 |

## 7 CRITERIA FOR CONFORMITY

### 7.1 Visual examination

All the selected rolls shall be examined for appearance, texture and weave defects as required in **3.1**. The number of defective rolls shall not exceed 0 for sample size up to 10, 1 for sample size 16 and 2 for sample size 24.

### 7.2 Dimensional tests

For length, width and mass per unit area all sample rolls in the case of lot size up to 50 and 10 in the case of lot size above 50 shall be tested. The lot shall be deemed conforming to the standard if all sample rolls pass these tests.

### 7.3 Physical tests

For thread density, breaking load, dimensional changes and crease recovery, five tests shall be conducted on test pieces suitably taken from the sample rolls. The lot shall be deemed conforming to the requirements if no failure occurs.

### 7.4 Chemical and other tests

For starch content, bond strength and colour fastness, two independent tests shall be conducted for each characteristic. The lot shall be deemed conforming to the requirements if no failure occurs.

## APPENDIX A

## METHOD FOR THE DETERMINATION OF STARCH CONTENT

*(see* 3.5 *)*

### A.1 TEST SPECIMENS

From the sample under analysis draw a piece weighing about 10 g. Shred the piece into small bits and mix them thoroughly. Draw from the pieces so shredded a test specimen of about 5 g.

### A.2 PROCEDURE

Boil the test specimen in about 500 ml of distilled water in a conical flask for about 45 min. Cool the contents of the flask. Put a drop of iodine solution on a small quantity taken from the flask.

**A.3 REPORT**

Observe whether there is any appearance of blue colour. Take the material to be free from all starch if no blue colour is observed.

## APPENDIX B

## PREPARATION OF TEST SPECIMENS FOR BOND STRENGTH DETERMINATION

*(Serial No.6, Table 1)*

B.1 Fuse the base fabric, that is, shirting, with the fusible interlinings at the required temperature and pressure for the specific duration as advised by the manufacturer.

Cut test specimens of 25 mm x 300 mm size. Manually strip the specimen at one end over a distance of 25 mm. Secure the base fabric, that is, shirting, evenly in the upper jaw and the interlining in the lower jaw.

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