

SRI LANKA STANDARD 803: PART 1: 1987

UDC 677.494.674

SPECIFICATION FOR
SPUN POLYESTER YARNS
PART 1 — FOR WEAVING (CONVENTIONAL LOOMS)

SRI LANKA STANDARDS INSTITUTION

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SLS 803:Part 1:1987

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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 SPUN POLYESTER YARNS
PART 1 - FOR WEAVING (CONVENTIONAL LOOMS)

FOREWORD

This Sri Lanka Standard was authorized for adoption and publication by the Council of the Sri Lanka Standards Institution on 1987-11-18, after the draft, finalized by the Drafting Committee on Synthetic Yarn, had been approved by the Textiles Divisional Committee.

This part covers only the specifications for spun polyester yarns for weaving on conventional looms. Looms which have weft insertion rates equal to or less than 300 m/minute have been considered as conventional looms. Specifications for spun polyester yarns for weaving on non-conventional looms, slow speed knitting machines and high speed knitting machines will be covered in separate parts.

All standard 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 results of a test or analysis, 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 specification.

In the preparation of this specification, the assistance derived from the Uster News Bulletin is gratefully acknowledged.

1 SCOPE

This specification prescribes the requirements and methods of sampling and test for 100 per cent spun polyester yarns intended for use in conventional looms.

2 REFERENCES

- SLS 20 Determination of the size of yarns (First Revision)
- CS 22 Determination of breaking strength and extension of single strands

- SLS 23 Twist in yarns-Direct counting method (First Revision)
- CS 102 Presentation of numerical values
- SLS 428 Random sampling methods
- SLS 674 Determination of short-term irregularity of linear density of textile slivers, rovings and yarns using an electronic evenness tester.

3 REQUIREMENTS

3.1 General requirements

- 3.1.1 The yarn shall be reasonably clean and free from snarls.
- 3.1.2 The yarn shall also be heat-set.
- 3.1.3 Tail-ends of at least 500 mm shall be provided in all cones, if requested by the buyer.

3.2 Twist

The twist factor of the yarn shall be 28.7 minimum, and the coefficient of variation for the twist per metre shall not exceed 7 per cent, when determined by the method prescribed in SLS 23.

3.3 Other requirements

The yarn shall also comply with the requirements given in Table 1 when tested according to the relevant methods.

TABLE 1 - Requirements for spun polyester yarns

Sl. No.	Lineardensity of yarn in tex*	Single yarn strength, N, min.	U per cent max.	Imperfections per 1 000 m, max. (see Note)		
				Thin places (5)	Thick places (6)	Neps (7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	7.4	2.0	16.5	50	75	60
ii)	10	2.7	15.5	50	70	60
iii)	13	3.5	14.5	50	70	40
iv)	15	4.2	14.0	50	65	40
v)	20	5.6	13.0	40	65	40
vi)	2 x 7.4	4.0	14.0	40	60	40
vii)	2 x 10	5.6	12.5	40	60	40
viii)	2 x 20	11.2	10.5	15	25	20
Method of test	SLS 20	CS 22	SLS 674	SLS 674		

* See Clause 9.5 for tolerance.

4 DEFECTS

The following shall be considered to be common defects in cones:

- a) Soft cones and hard cones;
- b) Collapsed cones;
- c) Prominent stains inclusive of chalk and other markings;
- d) Cut thread;
- e) Absence of tail-end where it is required (the length of the tail-end should not be less than 500 mm);
- f) Stitches of more than 25 mm in length at the base; and
- g) Excessive stitches at the nose.

5 PACKAGING

Cones shall be individually wrapped in polyethylene or similar material to avoid damage and shall be packed in cartons unless otherwise agreed to between the buyer and the seller. All cartons shall have horizontal separators to prevent any damage to cones. The net mass of a cone shall be 1.2 ± 0.1 kg. An insert to prevent collapsing shall be inserted at the base of each cone.

6 MARKING

6.1 Marking of cones

Each cone shall be legibly and indelibly marked with the following information:

- a) Name of the product (indicate whether heat-set);
- b) Linear density of yarn, in tex;
- c) Name and address of the manufacturer (including the country of origin);
- d) Batch or code number; and
- e) Date of manufacture.

6.2 Marking of cartons

Each carton shall be legibly and indelibly marked with the following information:

- a) Name of the product (indicate whether heat-set);
- b) Linear density of yarn, in tex;
- c) Name and address of the manufacturer (including the country of origin);
- d) Number of cones in a carton;

- e) Gross mass, in kilograms
- f) Net mass, in kilograms and
- g) Batch or code number.

6.3 The cones may also be marked with the Certification Mark of the Sri Lanka Standards Institution illustrated below on permission being granted for such marking by the Sri Lanka Standards Institution.



NOTE - The use of the Sri Lanka Standards Institution Certification Mark (SLS Mark) is governed by the provisions of the Sri Lanka Standards Institution Act and the regulations framed thereunder. The SLS Mark on products covered by a Sri Lanka Standard is an assurance that they have been produced to comply with the requirements of that standard under a well defined system of inspection, testing and quality control, which is devised and supervised by the Institution and operated by the producer. SLS marked products are also continuously checked by the Institution for conformity to that standard as a further safeguard. Details of conditions under which a permit for the use of the Certification Mark may be granted to manufacturers or processors may be obtained from the Sri Lanka Standards Institution.

7 SAMPLING

7.1 Lot

All cones of spun polyester yarn of the same linear density drawn from a single batch of manufacture shall constitute a lot.

7.2 Scale of sampling

7.2.1 Samples shall be tested from each lot for ascertaining the conformity of the yarn to the requirements of this specification.

7.2.2 The number of cones to be selected from a lot shall be in accordance with Columns 1 and 2 of Table 2.

TABLE 2 - Scale of sampling

Number of cones in the lot (1)	Number of cones to be selected (2)	Acceptance number* (3)	Acceptance number for defects (4)
Up to 300	5	1	1
301 to 500	8	1	2
501 to 1 000	13	2	3
1 001 to 3 000	16	2	3
3 001 and above	20	3	4

7.2.3 If the cones are presented in cartons at least ten per cent of cartons subject to a minimum of three shall be drawn and as far as possible an equal number of cones shall be drawn from each selected carton to get the sample given in the table.

* *Applicable to unevenness and single yarn strength only.*

7.2.4 The cartons and cones shall be selected at random. In order to ensure randomness of selection random number tables as given in SLS 428 shall be used.

7.3 Number of tests

7.3.1 Each carton selected as in 7.2.3 shall be examined for packaging (5) and marking (6.2) requirements. (This may be done at the place of sampling).

7.3.2 Each cone selected as in 7.2.2 or 7.2.3 shall be examined for packaging (5) and marking requirements (6.1).

7.3.3 Each cone selected as in 7.2.2 or 7.2.3 shall be inspected for common defects (see 4).

7.3.4 Each cone selected as in 7.2.2 or 7.2.3 shall be tested for the requirements given in 3.2 and 3.3. For each requirement, required test specimen shall be obtained as in accordance with the relevant test methods.

NOTE - It is necessary to discard at least 50 m from a cone before taking test specimens.

8 METHODS OF TESTS

Tests shall be carried out as prescribed in 3.2 and 3.3.

9 CONFORMITY TO STANDARD

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

9.1 Each carton examined as in 7.3.1 satisfies the packaging and marking requirements.

9.2 Each cone examined as in 7.3.1 or 7.3.2 satisfies the packaging and marking requirements.

9.3 The number of defects observed on cones when inspected as in 7.3.3 does not exceed the corresponding acceptance number given in Column 4 of Table 2.

9.4 The average twist factor calculated from the test results when tested as in 7.3.4 is more than the specified value and the coefficient of variation is less than 7 per cent.

9.5 The average linear density calculated from the test results when tested as in 7.3.4 lies within 3 per cent of the nominal linear density specified and co-efficient of variation for the linear density is less than 4 per cent.

9.6 The number of cones, not conforming to one or more requirements given in 3.3 other than the linear density when tested as in 7.3.4 does not exceed the corresponding acceptance number given in Column 3 of Table 2.

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SLS CERTIFICATION MARK

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.



SRI LANKA STANDARDS INSTITUTION

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.