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Indian Standard

DUPION RAW SILK — GRADING AND METHODS OF TEST

PART 1 GRADING

ICS 59.060.10
FOREWORD

This Indian Standard (Part 1) was adopted by the Bureau of Indian Standards, after the draft finalized by the Silk and Silk Products Sectional Committee had been approved by the Textile Division Council.

Grading of dupion silk is very important from the viewpoint of quality of the dupion silk and the subsequent products made from it. This will also help the farmers to get the right value of their product and remove malpractices in the dupion silk trade. For raw silk, BIS has already published IS 15090 (Parts 1 to 11) 'Raw silk -- Grading and methods of tests'. This standard is published in five parts. The other parts in the series are:

- Part 2 Visual examination
- Part 3 Determination of special defects
- Part 4 Conducting winding test
- Part 5 Determination of average size and size uniformity range

This standard specifies different grades of dupion silk based on visual examination, special defects, winding tests and average size and uniformity of size.

The composition of the Committee responsible for the formulation of this standard is given in Annex B.

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 analysis, shall be rounded off in accordance with IS 2:1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.
Indian Standard

DUPION RAW SILK — GRADING AND METHODS OF TEST

PART 1 GRADING

1 SCOPE
This standard prescribes a method of grading of dupion raw silk.

2 REFERENCES
The standards given below contain provisions which through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of standard.

IS No. Title
15825 Dupion raw silk — Grading and methods of test :
(Part 2) : 2008 Visual examination
(Part 3) : 2008 Determination of special defects
(Part 4) : 2008 Conducting winding test
(Part 5) : 2008 Determination of average size and size uniformity range
SP 45 : 2006 Handbook on glossary of textile terms (first revision)

3 TERMINOLOGY
For the purpose of this standard, the following definitions in addition to those given in SP 45 shall apply.

3.1 Dupion Raw Silk — Raw silk reeled either entirely from double cocoons or from a mixture of double and single cocoons or even from single cocoons only but reeled in such a way as to give effect of dupion.

3.2 Hank — Silk reeled and removed from a reeling machine in the form of an open band. It shall be one continuous thread made by tying all breaks with good, clean knots, with the loose ends cut not more than 3 mm long. The outside end of the thread shall be tied round the hank in such a manner as to be easily found. The hank shall be laced at places equally spaced with a fine soft twisted cotton or spun silk yarn passed through at least five diamonds in the width of the hank, tied such that the knot is about one centimetre from the edge of the hank and the loose ends ought not to exceed one centimetre from the knot.

4 GRADES
The silk shall be assigned the Grades XX, X, I, II and III based on the examination and tests carried out as given in Table 1. Grade XX shall be the highest and Grade III shall be the lowest in the order of merit.

5 EXAMINATION AND TESTS

5.1 Unit of Grading
The examination and tests shall be conducted on the lot of dupion raw silk offered for grading. The lot shall not be less than 12 kg and not more than 60 kg. In case the lot size is more than 60 kg, the lot shall be divided in two or more lots that is in lots of 12 to 60 kg.

5.2 Examination and Tests
5.2.1 Each lot of dupion raw silk offered for grading shall be examined visually and tactually according to the method prescribed in Part 2.

5.2.2 After visual and tactual examination, each lot of dupion raw silk shall be evaluated for the characteristics listed in Table 2 as per the methods of tests prescribed against each characteristic.

6 GRADING
The dupion raw silk shall be assigned the grade based on the visual examination and results of various tests conducted as given in Table 1.

7 METHOD OF CLASSIFICATION
7.1 The grade of a lot shall be determined to the lowest grade amongst size uniformity range, special defects and winding breaks as tabulated in Table 1.

7.2 In case the result of the visual inspection of a lot is found to be poor in its uniformity and/or its general finish, the grade of the lot shall be one below that as determined in accordance with 7.1.

8 REPORT
The grading assigned to the lot of dupion raw silk shall be reported in the format given in Annex A.
Table 1 Grading of Dupion Raw Silk

(\textit{Clauses 4 and 6})

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Test Item</th>
<th>Size</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>i)</td>
<td>Size uniformity range, percent</td>
<td>8.8 tex (79 d) or finer</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.9 tex (80 d) or coarser</td>
<td>60</td>
</tr>
<tr>
<td>ii)</td>
<td>Special defects (Penalties)</td>
<td>8.8 tex (79 d) or finer</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8.9-17.7 tex (80-159 d)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.8 tex (160 d) or coarser</td>
<td>3</td>
</tr>
<tr>
<td>iii)</td>
<td>Winding (Breaks/4 skeins)</td>
<td>17.7 tex (159 d) or finer</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>17.8 tex (160 d) or coarser</td>
<td>2</td>
</tr>
</tbody>
</table>

Table 2 Characteristics and Methods of Tests

(\textit{Clause 5.2.2})

<table>
<thead>
<tr>
<th>SI No.</th>
<th>Characteristics</th>
<th>Method of Test, Ref to Part of This Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>i)</td>
<td>Special defects</td>
<td>Part 3</td>
</tr>
<tr>
<td>ii)</td>
<td>Winding</td>
<td>Part 4</td>
</tr>
<tr>
<td>iii)</td>
<td>Size uniformity range</td>
<td>Part 5</td>
</tr>
</tbody>
</table>
ANNEX A
(Clause 8)

PROFORMA FOR GRADING CERTIFICATE OF DUPION RAW SILK
[Conducted in accordance with IS 15825 (Part 1)]

Name of testing house: .........................................................
Grading certificate No.: ......................................................
Identity of the lot: ..............................................................
Average size: .................................................................

<table>
<thead>
<tr>
<th>Test Item</th>
<th>Value</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size uniformity range, percent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special defects (Penalties)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Winding (Breaks/4 skeins)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Grade</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks:

Date: .................................................................

Authorised Signatory
ANNEX B
(Foreword)

COMMITTEE COMPOSITION
Silk and Silk Products Sectional Committee, TXD 28

**Organization**

- Central Silk Technological Research Institute, Bangalore
- Association of Corporations & Apex Societies of Handlooms, New Delhi
- Central Silk Board, Bangalore
- Chamundi Textiles (Silk Mills) Limited, Bangalore
- Directorate of Handlooms & Textiles, Government of Tamil Nadu, Chennai
- Himatsingka Seide Limited, Bangalore
- Indian Silk Export Promotion Council, Mumbai
- Karnataka Silk Industries Corporation, Bangalore
- Karnataka State Sericulture Development Institute, Bangalore
- Khadi & Village Industries Commission, Mumbai
- National Handloom Development Corporation Ltd, Lucknow
- Office of Development Commissioner for Handlooms, Government of India, New Delhi
- Office of Director of Handloom & Textiles, Government of Karnataka, Bangalore
- Office of the Textile Commissioner, Mumbai
- Shriram Institute for Industrial Research, Delhi
- Silk Conditioning and Testing House, Bangalore
- The Tamil Nadu Handloom Weaver's Cooperative Society Ltd, Chennai
- Weavers' Service Centre, Ministry of Textiles, Bangalore
- BIS Directorate General

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- SHRI S. Raute (Alternate)
- PRINCIPAL, INDIAN INSTITUTE OF HANDLOOM TECHNOLOGY, SALEM
- JOINT DIRECTOR (TEXTILES)
- DEPUTY DIRECTOR (HANDLOOMS) (Alternate)
- SHRI S. G. Verma
- SHRI S. RamaKrishnan (Alternate)
- MS Neena Sehgal
- DR R. K. Raina (Alternate)
- REPRESENTATIVE
- SHRI G. Gunasekaran
- SHRI Alok Babelay (Alternate)
- DIRECTOR
- DEPUTY DIRECTOR (Alternate)
- SHRI M. S. Verma, Scientist 'F' & Head (Textiles)
  [Representing Director General (Ex-officio)]

Member Secretary
SHRI J. K. GUPTA
Scientist ‘C’ (Textiles), BIS
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Amendments Issued Since Publication

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