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असाधारण
EXTRAORDINARY

भाग II—खण्ड 3—उप-खण्ड (ii)
PART II—Section 3—Sub-section (ii)

प्राधिकार से प्रकाशित
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नई दिल्ली, सोमवार, जून 6, 2022/ज्येष्ठ 16, 1944
NEW DELHI, MONDAY, JUNE 6, 2022/JYAISHTHA 16, 1944

वस्त्र मंत्रालय

आदेश

नई दिल्ली, 6 जून, 2022

का.आ. 2601(अ).—भारतीय मानक ब्यूरो अधिनियम, 2016 (2016 का 11) की धारा 17 के साथ पठित धारा 16 की उप-धारा (1) और (2) और धारा 25 की उप-धारा 3 द्वारा प्रदत्त शक्तियों का प्रयोग करते हुए, भारतीय मानक ब्यूरो से परामर्श करने के बाद, केन्द्र सरकार की यह राय है कि जनहित में ऐसा करना आवश्यक या समयोचित है, एतद्वारा निम्नलिखित आदेश देती है, यथा: -

- संक्षिप्त शीर्षक, प्रारंभ और आवेदन** - (1) इस आदेश को पटसन बैग (गुणवत्ता नियंत्रण) आदेश, 2022 कहा जा सकता है।
(2) यह उक्त आदेश के जारी होने की तारीख से प्रभावी होगा।
(3) यह नीचे दी गई तालिका के कॉलम (2) में निर्दिष्ट माल या वस्तु पर लागू होगा, लेकिन ऐसे माल या वस्तु पर लागू नहीं होगा जो निर्यात के लिए बनी हों।
- मानक चिह्न का अनिवार्य उपयोग**-. नीचे दी गई तालिका के कॉलम (2) में निर्दिष्ट सामान या वस्तु उक्त तालिका के कॉलम (3) में दिए गए भारतीय मानक के अनुरूप होंगे और भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियमन, 2018 की अनुसूची-II की योजना-I के अनुसार भारतीय मानक ब्यूरो से प्राप्त लाइसेंस के तहत मानक चिह्न धारित करेगा।
- प्रमाणन और प्रवर्तन प्राधिकरण** - भारतीय मानक ब्यूरो तालिका के कॉलम (2) में निर्दिष्ट माल या वस्तु के संबंध में प्रमाणन और प्रवर्तन प्राधिकारी होगा।

4. उल्लंघन के लिए दंड - इस आदेश के प्रावधानों का उल्लंघन करने वाला कोई भी व्यक्ति भारतीय मानक ब्यूरो अधिनियम, 2016 के प्रावधानों के तहत दंडनीय होगा।

तालिका

| क्र.सं. | माल या वस्तु | भारतीय मानक | भारतीय मानक का शीर्षक |
|---------|--|--------------------|---|
| (1) | (2) | (3) | (4) |
| 1. | ए-ट्रिवल | आईएस 1943: 1995 | वस्त्र ए-ट्रिवल पटसन बैग-विनिर्देश |
| 2. | खाद्यान्न पैकिंग के लिए बी-ट्रिवल पटसन बैग | आईएस 2566:1993 | खाद्यान्न पैकिंग के लिए वस्त्र - बी-ट्रिवल पटसन बैग - विनिर्देश |
| 3. | 50 किलो खाद्यान्न पैक करने के लिए पटसन के बोरे | आईएस 12650:2018 | 50 किलो खाद्यान्न-पैकिंग के लिए वस्त्र पटसन बैग-विनिर्देश |
| 4. | 50 किलो चीनी पैक करने के लिए पटसन के बोरे | आईएस 15138:2010 | 50 किलो चीनी पैकिंग के लिए वस्त्र पटसन बैग-विनिर्देश |
| 5. | 50 किलो खाद्यान्न की पैकिंग के लिए हल्के वजन के पटसन के बोरे | आईएस 16186:2014 | 50 किलो खाद्यान्न पैकिंग के लिए वस्त्र - हल्के वजन के पटसन बोरे - विनिर्देश |
| 6. | 30 किलो तक खाद्यान्न पैक करने के लिए पटसन के बोरे | आईएस 16372:2015 | 30 किलो तक खाद्यान्न पैक करने के लिए वस्त्र पटसन बैग-विनिर्देश |

नोट: भारतीय मानकों का नवीनतम संस्करण, जिसमें उनके जारी किए गए संशोधन शामिल हैं, जैसा कि ब्यूरो द्वारा समय-समय पर प्रकाशित और अधिसूचित किया गया है, ब्यूरो द्वारा अधिसूचित करने की तारीख से लागू होगा।

[फा. सं. जे-15/1/2022-पटसन अनुभाग]

प्राजक्ता एल. वर्मा, संयुक्त सचिव

MINISTRY OF TEXTILES

ORDER

New Delhi, the 6th June, 2022

S.O. 2601(E).—In exercise of the powers conferred by sub-section (1) and (2) of section 16 read with section 17 and sub-section 3 of section 25 of the Bureau of Indian Standards Act, 2016 (11 of 2016), the Central Government, after consulting the Bureau of Indian standards, is of the opinion that it is necessary or expedient so to do in the public interest, here by makes the following Order, namely:-

- Short title, commencement and application.** - (1) This Order may be called the Jute Bags (Quality Control)Order, 2022.
(2) It shall come into force with effect from the date of issuance of the above Order.
(3) It shall apply to goods or article specified in column (2) of the Table below, but shall not apply to such goods or article meant for export.
- Compulsory use of Standard Mark.-.** Goods or article specified in column (2) of the Table below shall conform to the corresponding Indian Standard given in column (3) of the said Table and shall bear the Standard Mark under a licence from the Bureau of Indian Standards as per Scheme-I of Schedule-II of the Bureau of Indian Standards (Conformity Assessment) Regulations, 2018.
- Certification and Enforcement Authority.-**The Bureau of Indian Standards shall be the certifying and enforcing authority in respect of the goods or article specified in column (2) of the Table.

- 4. Penalty for Contravention.** - Any person who contravenes the provisions of this Order shall be punishable under the provisions of the Bureau of Indian Standards Act,2016.

TABLE

| Sl. No. | Goods or article | Indian Standard | Title of Indian Standard |
|----------------|---|------------------------|--|
| (1) | (2) | (3) | (4) |
| 1. | A-twill jute bags | IS 1943: 1995 | Textiles-A-twill jute bags-Specification |
| 2. | B-twill jute bags for packing foodgrains | IS 2566:1993 | Textiles-B-twill jute bags for packing foodgrains-Specification |
| 3. | Jute bags for packing 50 kg foodgrains | IS 12650:2018 | Textiles-Jute bags for packing 50 kg foodgrains-Specification |
| 4. | Jute bags for packing 50 kg sugar | IS 15138:2010 | Textiles-Jute bags for packing 50kg sugar-Specification |
| 5. | Light weight jute sacking bags for packing 50 kg foodgrains | IS 16186:2014 | Textiles-Light weight jute sacking bags for packing 50 kg foodgrains Specification |
| 6. | Jute bags for packing up to 30 kg foodgrains | IS 16372:2015 | Textiles-Jute bags for packing up to 30 kg foodgrains- Specification |

Note : The latest version of Indian Standards including amendments issued thereof, as published and notified by the Bureau from time to time, shall be applicable from the date as notified by the Bureau.

[F. No. J-15/1/2022-Jute Section]

PRAJAKTA L. VERMA, Jt. Secy.

IS 1943 : 1995
(Reaffirmed 2006)

भारतीय मानक

वस्त्रादि — ए-ट्विल पटसन के बोरे — विशिष्ट
(दूसरा पुनरीक्षण)

Indian Standard

**TEXTILES – A-TWILL JUTE BAGS —
SPECIFICATION**

(*Second Revision*)

First Reprint APRIL 1999
(Incorporating Amendment No. 1)
UDC 621.798.151 [677.13]

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

April 1995

Price Group 1

FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Jute and Jute Products Sectional Committee had been approved by the Textile Division Council.

This standard was first published in 1961 and it was subsequently revised in 1964. This standard has been revised again so as to ensure compatibility regarding general requirements of A-twill jute bags with those specified in IS 9113: 1992 'Textiles — Jute sacking — General requirements (*first revision*)'.

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.

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Indian Standard

**TEXTILES — A-TWILL JUTE BAGS -
SPECIFICATION**

(Second Revision)

1 SCOPE

This standard prescribes constructional details and other requirements of A-twill jute bags.

2 REFERENCES

The following Indian Standards are necessary adjuncts to this standard:

| <i>IS No.</i> | <i>Title</i> |
|---------------|---|
| 1963 : 1981 | Method for determination of threads per unit length in woven fabrics (<i>second revision</i>) (Reaffirmed April 1993) |
| 1969 : 1985 | Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>) (Reaffirmed April 1993) |
| 2873 : 1991 | Textiles — Packaging of jute products in bales — Specification (<i>second revision</i>) |
| 2969 : 1974 | Method for determination of oil content of jute yarn and fabrics (<i>first revision</i>) (Reaffirmed March 1993) |
| 5476 : 1986 | Glossary of terms relating to jute (<i>first revision</i>) |
| 9030 : 1979 | Method for determination of seam strength of jute fabrics including their laminates (Reaffirmed March 1992) |
| 9113 : 1993 | Textiles — Jute sacking—General requirements (<i>first revision</i>) |

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5476 : 1986 shall apply.

4 MANUFACTURE**4.1 Sacking**

The bags shall be made from single piece of double warp, 2/1 twill weave jute sacking of uniform construction having nominal mass of 750 g/m² with warp running along the length of the bag. There shall be three blue stripes, or stripes as agreed to between the buyer and the seller, woven along the length of the bag. The

constructional particulars of sacking used in the fabrication of the bags shall be such that the bag meets the requirement specified in Table 1.

4.2 Seam

The sides of the bags shall be sewn with overhead or herakle stitches on selvedge through two layers of sacking as specified in IS 9113 : 1993. The number of stitches per 10 cm shall be between 9 and 11.

4.3 Safety Stitch

A line of safety union stitch shall be provided at the inner edges of the overhead or herakle stitches (*see* IS 9113 : 1993). The number of safety union stitches per 10 cm shall be between 9 and 11.

4.4 Hemming at the Mouth

Provisions of IS 9113 : 1993 shall apply.

4.5 Joined Bag

Provisions of IS 9113 : 1993 shall apply.

4.6 Freedom from Defects

The bags shall be generally free from weaving and sewing defects such as missing picks, holes, cuts, tears, floats, crushed selvedges, spots, stains, gap stitches, loose ends and frayed ends which effect the performance of the bag.

5 SPECIFIC REQUIREMENTS

5.1 The bags shall conform to the requirements specified in Table 1.

5.2 The bales containing the bags shall conform to the requirements specified in Table 2.

5.3 The contract moisture regain shall be 20 percent.

6 PACKING

The bags shall be packed in bales as prescribed in IS 2873 : 1991 or as specified in the agreement between the buyer and the seller.

7 MARKING

7.1 The bales shall be marked as prescribed in IS 2873 : 1991. Additional marking shall be made as stipulated by the buyer or required by the regulation or law in force.

Table 1 Particulars of Bags

(Clauses 4.1 and 5.1)

| SL No. | Characteristic | Requirement | Tolerance | Method of Test |
|--------|---|---------------|---------------|--------------------------------|
| (1) | (2) | (3) | (4) | (5) |
| i) | Dimensions, cm (see Note): | | | |
| | a) Outside length | 112 | + 4 | Clause 8.3.2 of IS 9113 : 1993 |
| | b) Outside width | 67.5 | - 0 | |
| ii) | Corrected mass per bag, g | 1 190 | + 120 - 90 | Clause 8.5.2 of IS 9113 : 1993 |
| iii) | Ends per dm | 102 | ± 6 | IS 1963 : 1981 |
| iv) | Picks per dm | 35 | ± 2 | IS 1963 : 1981 |
| v) | Average breaking load of sacking [revelled strip method, 10 cm × 20 cm] <i>Min</i> , N (kgf): | | | IS 1969 : 1985 |
| | Warpway | 2 000 (204) | | |
| | Weftway | 1 765 (180) | | |
| vi) | Average breaking load of seam [revelled strip method, 10 cm × 20 cm] <i>Min</i> , N (kgf) | 657 (67) | | IS 9030: 1979 |

NOTE — The buyer and the seller may agree to the dimensions other than those specified above. The tolerance of ± 4 cm shall apply on the dimensions.

The mass of such bag may be calculated by the method given in 5.3 of IS 9113 : 1992. However, a tolerance of ± 10 percent on the bag mass shall be permissible.

Table 2 Requirements of Packed Bales

(Clause 5.2)

| SL No. | Characteristic | Requirement | Methods of Test |
|--------|--|------------------------|------------------------------|
| (1) | (2) | (3) | (4) |
| i) | Total number of bags per bale (see Note) | 400 | Clause 8.9 of IS 9113 : 1993 |
| ii) | Number of joined bags per bundle of 25 bags | 1 | do |
| iii) | Contract mass of a bale | 476 | — |
| iv) | Corrected net mass of a bale | Not less than contract | Clause 8.1 of IS 9113 : 1993 |
| v) | Moisture regain, percent, <i>Max</i> | 22 | Clause 8.2 of IS 9113 : 1993 |
| vi) | Oil content on dry deoiled material basis, percent, <i>Max</i> | 8.0 | IS 2969 : 1974 |

NOTE — The number of bags per bale shall be 400 or as specified in an agreement between the buyer and the seller.

7.2 BIS Certification Marking

The bales may also be marked with the Standard Mark.

7.2.1 The use of the Standard Mark is governed by the provisions of Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of Standard Mark

may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

8 SAMPLING AND CRITERIA FOR CONFORMITY

The sampling procedure and criteria for conformity as specified in IS 9113:1993 shall be followed.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

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Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards Monthly Additions'.

This Indian Standard has been developed from Doc: No. TX 03 (0084).

Amendments Issued Since Publication

| Amend No. | Date of Issue | Text Affected |
|-----------|---------------|---------------|
| | | |
| | | |
| | | |

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AMENDMENT NO. 2 MAY 2002
TO
IS 1943:1995 TEXTILES — A-TWILL JUTE BAGS —
SPECIFICATION

(Second Revision)

[*Page 2, Table 2, Sl No. (vi), column 3*] — Substitute '3' for '8.0'

(TX 03)

AMENDMENT NO. 3 NOVEMBER 2002
TO
IS 1943 : 1995 TEXTILES — A-TWILL
JUTE BAGS — SPECIFICATION

(Second Revision)

(Pages 1 and 2) — Substitute 'IS 9113:1993' for 'IS 9113:1992' wherever exists.

(Page 2, Table 1, Note) — Designate the existing Note as Note 1 and insert Note 2 as under:

NOTE 2 — In case of bags having herakle stitching with safety stitch, the corrected mass per bag shall be 1 200 g instead of 1 190 g.

[Page 2, Table 2, Sl No. (iii), column 2] — Substitute 'Contract mass of a bale, kg' for 'Contract mass of a bale'.

[Page 2, Table 2, Sl No. (iii), column 3] — Substitute '480' for '476'.

[Page 2, Table 2, Sl No. (iv), column 3] — Substitute 'Not less than the contract mass' for 'Not less than contract'.

(TX 03)

AMENDMENT NO. 4 JULY 2004
TO
IS 1943:1995 TEXTILES — AT WILL JUTE BAGS—
SPECIFICATION
(Second Revision)

(Page 1, clause 1) — Substitute the following for the existing:

'1 SCOPE

1.1 This standard prescribes constructional details and other requirements of A-Twill Jute bags.

1.2 The bags specified in the standard shall not be manually handled after packing material.'

(TX 03)

Reprography Unit, BIS, New Delhi, India

AMENDMENT NO. 5 OCTOBER 2005
TO
IS 1943:1995 TEXTILES — A-TWILL JUTE BAGS —
SPECIFICATION

(Second Revision)

(Page 1, clause 4.1) — Insert the following note at the end of paragraph:

'NOTE— Mass of fabric in g/m^2 is given for guidance only.'

(TX 03)

IS 2566 : 1993
Reaffirmed Feb 2006

भारतीय मानक

वस्त्रादि — अनाज भरने के बी-ट्विल पटसन के बोरे — विशिष्टि
(तीसरा पुनरीक्षण)

Indian Standard

**TEXTILES — B-TWILL JUTE BAGS FOR
PACKING FOODGRAINS – SPECIFICATION**

(Third Revision)

First Reprint JUNE 1993

UDC 621.798.151 : 677.13.074.162.5 : 633.1

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

February 1993

Price Group 2

FOREWORD

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

This standard was first published in 1963 and revised in 1965 and 1984. This revision has been prepared to upgrade the performance of jute bags, at the request of Food Corporation of India to minimize wastage of foodgrains. The following are the major changes incorporated in this revision:

- a) Tolerances presently specified for ends and picks per dm will have been tightened.
- b) General requirements and criteria for conformity have been laid down in IS 9113 : 1993.

The mass of bags of different sizes at various moisture regains are given in Annex B for information.

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.

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Indian Standard

**TEXTILES — B-TWILL JUTE BAGS FOR
PACKING FOODGRAINS — SPECIFICATION**

(Third Revision)

1 SCOPE

This standard prescribes constructional details and other requirements of jute bags for packing 100, 93 and 75 kg foodgrains.

NOTE — Jute bags for packing 50 kg of foodgrains are covered by IS 12650 : 1989. Specification for jute bags for packing foodgrains 50 kg.

2 REFERENCES

The Indian Standards listed in Annex A are necessary adjuncts to this standard.

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5476 : 1986 shall apply.

4 MANUFACTURE

4.1 The bags shall be made from cloth conforming to IS 3667 : 1993. It shall be made from a single piece of cloth preferably the warp running along the length of the bag.

There shall be a single blue stripe (or stripes) of single or double warp as agreed to between the buyer and the seller, woven along the length of the bag. Additional woven identification mark may be provided if required by the buyer.

4.2 Hemming at the Mouth

Provisions of IS 9113 : 1993 shall apply.

4.3 Seam

4.3.1 For bags with hemming at the mouth, the sides of the bags shall be sewn with overhead or herakles stitches on selvedge through two layers of fabric (*see* Fig. 1). The stitching shall be of even tension throughout with all the loose ends securely fastened. The number of stitches per 10 cm at the sides shall be between 9 and 11 (*see also* IS 9113 : 1993).

4.3.1 For bags with selvedge at the mouth, the stitching of the raw edges of the bag shall be done after turning to a depth of 38 mm, with overhead or herakle stitches through four layers

of the fabric (*see* Fig. 2). The bottom of the bag shall be stitched at selvedge through two layers of the fabric with overhead or herakle stitch as the case may be (*see also* IS 9113 : 1993).

4.4 Joined Bag

Provisions of IS 9113 : 1993 shall apply.

4.5 Freedom from Defects

The bags should be generally free from weaving and sewing defects which effect the performance of the bag, such as holes, cuts, tears, floats, crushed selvedges, soots, stains, gap stitches, loose ends and frayed ends.

5 SPECIFIC REQUIREMENTS

5.1 The bag shall conform to the requirements specified in Table 1.

5.2 The bales containing the bags shall conform to the requirements as laid down in Table 2.

5.3 The contract moisture regain shall be 20 percent.

6 PACKING AND MARKING**6.1 Packing**

The bags shall be packed in bales as laid down in IS 2873 : 1991 or as specified in an agreement between the buyer and the seller.

6.2 Marking

The bales shall be marked as laid down in IS 2873 : 1991. Additional marking shall be made as stipulated by the buyer or required by the regulation or law in force.

6.2.1 The bales may also be marked with the Standard Mark.

7 SAMPLING

7.1 The sampling shall be as laid down in IS 9113 : 1993.

7.2 A lot shall be considered as conforming to the requirements of the standard if the conditions as laid down in IS 9113 : 1993 are satisfied.

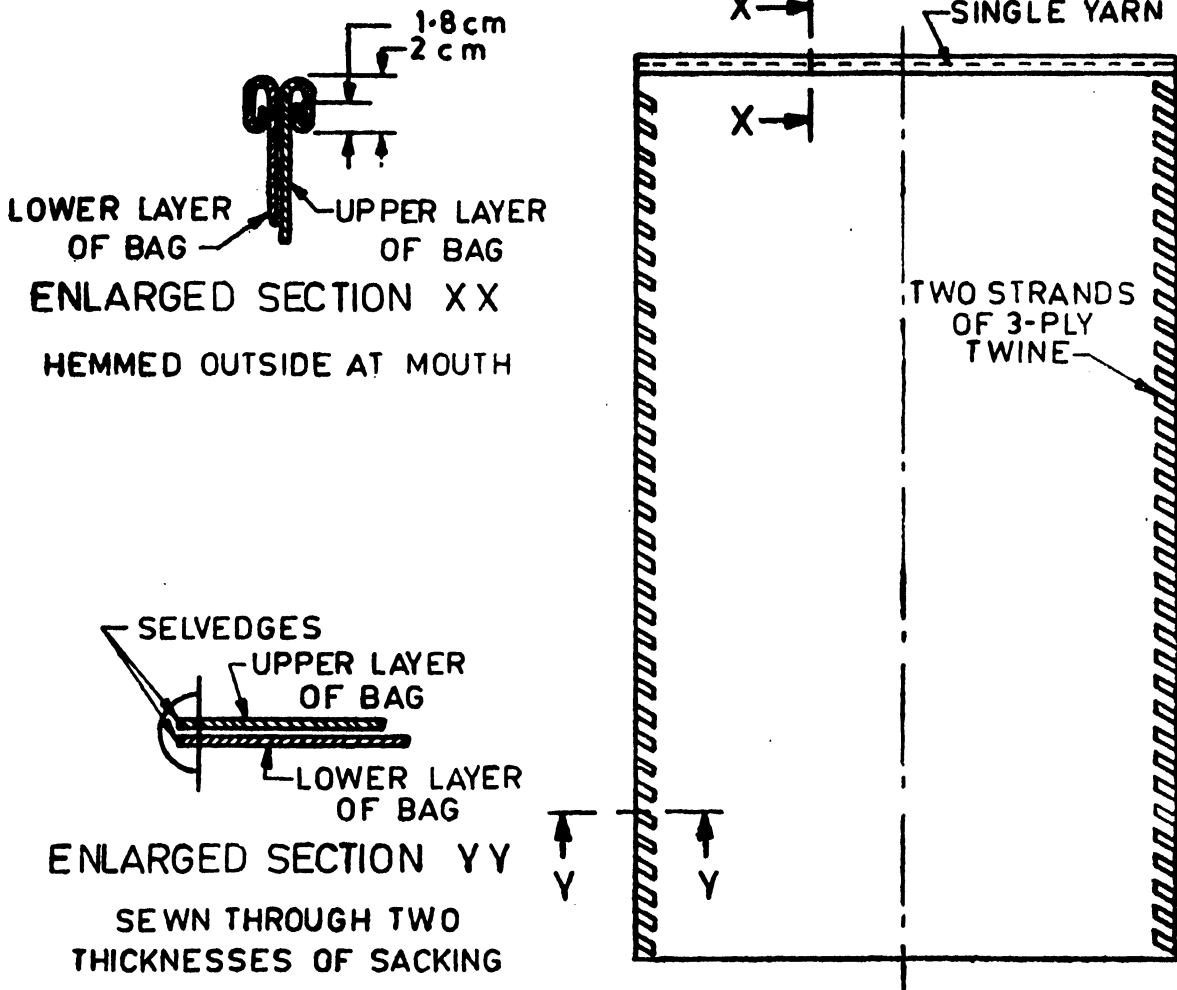
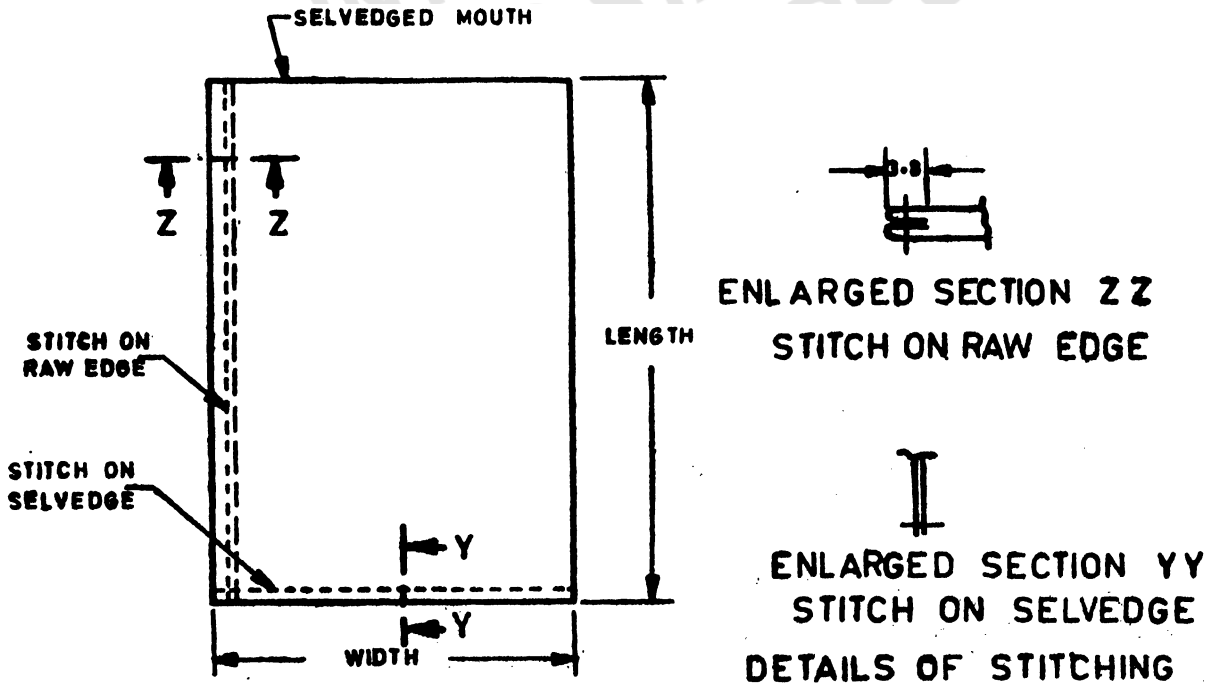


FIG. 1 B-TWILL JUTE BAG



All dimensions in centimetres.

FIG. 2 CONSTRUCTION OF A TYPICAL SELVEDGED BAG (BAG LENGTH = CLOTH WIDTH)

Table 1 Requirements of B-Twill Jute Bags for Foodgrains
(Clause 5.1)

| Sl No. | Characteristic | Sizes | | | Method of Test |
|--------|--|---------------|---------------|--------------|-----------------------------------|
| | | 100 kg (3) | 93 kg (4) | 75 kg (5) | |
| (1) | (2) | | | | (6) |
| i) | Dimensions (see Note): | | | | |
| | a) Outside length, cm | 122 | 112 | 106.5 | IS 1954 : 1990 |
| | b) Outside width, cm | 67.5 | 67.5 | 61 | |
| | Tolerance, cm | | + 4 - 0 | | |
| ii) | Corrected mass per bag, g: | | | | 8.5.2 of IS 9113 : 1993 |
| | a) Overhead stitch | 1110 | 1020 | 880 | |
| | b) Herakle stitch | 1115 | 1025 | 885 | |
| | Tolerance, percent | | + 10 - 7.5 | | |
| iii) | Ends per dm | | 76 | | IS 1963 : 1981 |
| | Tolerance | | + 4 - 3 | | |
| iv) | Picks per dm | | 31 | | IS 1963 : 1981 |
| | Tolerance | | + 2 - 1 | | |
| v) | Breaking load of cloth (<i>Min</i>) (revelled strip method, 10 × 20 cm): | | | | IS 1969 : 1985 |
| | a) Warpway : Average | | 1570 (160) | | |
| | b) Weftway : Average | | 1620 (165) | | |
| vi) | Scam breaking load (<i>Min</i>) (revelled strip method, 5 × 20 cm) N (kgf) | | | | IS 9030 : 1979 |
| | Average | | 608 (62) | | |

NOTE — These are recommended sizes for packing of different mass of wheat, rice and similar coarse grains. For other materials packed and if desired by the buyer and the seller dimensions other than those specified above may be adopted. In that case, tolerance of ± 4 cm shall apply.

Table 2 Requirements of Packed Bales of B-Twill Jute Bags
(Clause 5.2)

| Sl No. | Characteristic | Sizes | | | Method of Test |
|--------|---|---------------------------------|--------------|--------------|---------------------------------|
| | | 100 kg (3) | 93 kg (4) | 75 kg (5) | |
| (1) | (2) | | | | (6) |
| i) | Total number of bags per bale | 300 | 300 | 300 | 8.9 of IS 9113 : 1993 |
| ii) | Number of joined bags per bundle of 25 bags | 1 | 1 | 1 | —do— |
| iii) | Contract mass of a bale, kg: | | | | |
| | a) Overhead stitch | 333 | 306 | 264 | |
| | b) Herakle stitch | 334.5 | 307.5 | 265.5 | |
| iv) | Correct net mass of a bale | Not less than the contract mass | | | 8.1 of IS 9113 : 1993 |
| v) | Moisture regain percent, <i>Max</i> | | 22 | | 8.2 of IS 9113 : 1993 |
| vi) | Oil content on dry deoiled material basis, percent, <i>Max</i> | | 8.0 | | IS 2969 : 1974 |

ANNEX A
(Clause 2.1)

LIST OF REFERRED INDIAN STANDARDS

| <i>IS No.</i> | <i>Title</i> | <i>IS No.</i> | <i>Title</i> |
|---------------|---|---------------|--|
| 1954 : 1990 | Methods for determination of length and width of fabric (<i>second revision</i>) | 2969 : 1974 | Method for determination of oil content of jute yarn and fabrics (<i>first revision</i>) |
| 1963 : 1981 | Methods for determination of threads per unit length in woven fabrics (<i>second revision</i>) | 3667 : 1993 | Textiles — B-twill jute cloth — Specification (<i>second revision</i>) |
| 1969 : 1985 | Methods for determination of breaking load and elongation of woven textile fabrics (<i>second revision</i>) | 5476 : 1986 | Glossary of terms pertaining to jute (<i>first revision</i>) |
| 2873 : 1991 | Textiles — Packaging of jute products in bales — Specification (<i>first revision</i>) | 9030 : 1979 | Method for determination of seam strength of jute fabrics including their laminates |
| | | 9113 : 1993 | Textile — Jute sacking — General requirements (<i>first revision</i>) |

ANNEX B
(Foreword)

MASS OF B-TWILL JUTE BAGS AT DIFFERENT MOISTURE REGAIN VALUES

| <i>Moisture Regain Percent</i> | <i>Mass, in g, for Size of Bag</i> | | | | | |
|--------------------------------|------------------------------------|---------|-----------|---------|-----------|---------|
| | 100 kg | | 93 kg | | 75 kg | |
| | Over-head | Herakle | Over-head | Herakle | Over-head | Herakle |
| 22 | 1 130 | 1 135 | 1 037 | 1 042 | 894 | 900 |
| 20 | 1 110 | 1 115 | 1 020 | 1 025 | 880 | 885 |
| 18 | 1 092 | 1 097 | 1 003 | 1 008 | 865 | 870 |
| 16 | 1 074 | 1 079 | 986 | 991 | 851 | 856 |
| 14 | 1 055 | 1 060 | 969 | 974 | 836 | 841 |
| 12 | 1 037 | 1 042 | 952 | 957 | 821 | 826 |
| 10 | 1 018 | 1 023 | 935 | 940 | 807 | 811 |
| 8 | 1 000 | 1 004 | 918 | 922 | 792 | 796 |
| 7 | 991 | 995 | 910 | 914 | 785 | 789 |
| 6 | 981 | 986 | 901 | 905 | 777 | 782 |

Standard Mark

The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the 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 BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 1986* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

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Indian Standards are reviewed periodically and revised, when necessary and amendments, if any, are issued from time to time. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition. Comments on this Indian Standard may be sent to BIS giving the following reference:

Doc : No. TX 03 (0026)

Amendments Issued Since Publication

| Amend No. | Date of Issue | Text Affected |
|-----------|---------------|---------------|
| | | |
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| | | |
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AMENDMENT NO. 1 MAY 2002
TO
IS 2566 : 1993 TEXTILES — B-TWILL JUTE BAGS FOR
PACKING FOODGRAINS — SPECIFICATION

(*Third Revision*)

[*Page 3, Table 2, Sl No. (vi), col 4*] — Substitute '3' for '8.0'.

(TX 03)

Reprography Unit, BIS, New Delhi, India

AMENDMENT NO. 3 JULY 2004
TO
IS 2566 : 1993 TEXTILES — B-TWILL JUTE BAGS FOR
PACKING FOODGRAINS — SPECIFICATION
(Third Revision)

(Page 1, clause 1) — Substitute the following for the existing:

'1 SCOPE

1.1 This standard prescribes constructional details and other requirements of jute bags for packing 100, 93 and 75 kg foodgrains.

1.2 The bags specified in the standard shall not be manually handled after packing foodgrains.'

(TX 03)

Reprography Unit, BIS, New Delhi, India

वस्त्रादि — 50 कि ग्रा खाद्यान्न पैक
करने के लिए पटसन के बोरे —
विशिष्टि
(तीसरा पुनरीक्षण)

**Textiles — Jute Bags for Packing
50 kg Foodgrains — Specification**
(*Third Revision*)

ICS 55.080, 59.080.30

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FOREWORD

This Indian Standard was adopted by the Bureau of Indian Standards, after the draft finalized by the Jute and Jute Products Sectional Committee has been approved by the Textile Division Council.

The types of bags specified in this standard have been developed after extensive trials keeping in view the guidelines provided by the International Labour Organization (ILO) for not permitting manual carriage of weight exceeding 50 kg by the workers and consumers for their safety.

This standard was originally published in 1989 and subsequently revised in 1997 and 2003. The present revision has been made in the light of experience gained since its last revision and to incorporate the following major changes:

- a) 30 kg woven bags have been excluded from the scope of standard.
- b) Tolerances on ends/dm of Type A bags have been modified for improved structure and serviceability.
- c) Sampling and criteria for conformity have been modified.
- d) All the amendments issued have been incorporated.

A scheme for labelling environment friendly products known as ECO-Mark has been introduced at the instance of the Ministry of Environment and Forests (MEF), Government of India. The ECO-Mark would be administered by The Bureau of Indian Standards (BIS) under the *BIS Act, 2016*. For a product to be eligible for ECO Marking, it shall also carry the Standard Mark of BIS besides meeting the additional environment friendly requirements as applicable. However, these requirements shall be optional and manufacturing units shall be free to opt for Standard Mark alone also. The environment friendly requirements applicable to jute based products on Gazette Notification No. 457 dated 21 February 1991 published in the Gazette of India have been retained in this revision.

There is no ISO Standard on the subject. This standard has been formulated based on indigenous data/practices prevalent in the field in India.

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

**TEXTILES — JUTE BAGS FOR PACKING 50 KG
FOODGRAINS — SPECIFICATION**

(Third Revision)

1 SCOPE

This standard prescribes constructional details and other requirements of jute bags for packing 50 kg foodgrains.

2 REFERENCES

The following standards 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 the standards indicated below.

| <i>IS No.</i> | <i>Title</i> |
|---------------|---|
| 2873 : 1991 | Textiles — Packaging of jute products in bales — Specification (<i>second revision</i>) |
| 5476 : 1986 | Glossary of term relating to jute (<i>first revision</i>) |
| 9113 : 2012 | Textiles — Jute sacking — General requirements (<i>second revision</i>) |

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5476 shall apply.

4 MANUFACTURE

4.1 The bags shall be made from single piece of twill weave jute sacking of uniform construction having nominal mass of 579 g/m² as given below with warp running along the length of the bag:

- a) *Type A* — Single warp, double weft woven on modern shuttle less loom; and
- b) *Type B* — Double warp, single weft woven on conventional shuttle loom.

There shall be a single blue stripe, or stripes woven along the length of the bag or the bag shall be without stripe as agreed to between the buyer and the seller. The constructional particulars of sacking used in the fabrication of the bags shall be such that the bags meet the requirements specified in Table 1.

4.2 The sides of the bags shall be sewn with overhead or herakle stitches on selvedge through two layers of sacking as specified in IS 9113. The number of stitches per decimeter shall be 10 ± 1.

4.3 Safety Stitch

If agreed to between the buyer and the seller, a line of safety union stitch shall be provided at the inner edges of the herakle stitches (*see* IS 9113). The number of safety union stitches per decimetre shall be 10 ± 1.

4.4 Hemming at the Mouth

Provisions of IS 9113 shall apply.

4.5 Freedom from Defects

The bags shall meet the requirement of freedom from major defects as given in Annex A.

5 SPECIFIC REQUIREMENTS

5.1 The bags shall conform to the requirements specified in Table 1.

5.2 The bales containing the bags shall also conform to the requirements specified in Table 2.

5.3 The contract moisture regain shall be 20 percent.

5.4 Additional Requirements for Labelling as Environment Friendly Products**5.4.1 General Requirement**

5.4.1.1 The bags shall conform to the requirements for quality and performance prescribed under **5.1** to **5.3**.

5.4.1.2 The manufacturers shall produce to BIS, environmental consent clearance from the concerned State Pollution Control Board as per the provisions of *Water (Prevention and Control of Pollution) Act, 1974* and *Air (Preventions and Control of Pollution) Act, 1981* along with the authorization, if required under the *Environment (Products) Act, 2016* and the Rules made thereunder, while applying for ECO-Mark. Additionally, the manufacturer shall produce documentary evidence on compliance of the provisions related to noise level and occupational health under the provisions of *Factory Act, 1948* and Rules made thereunder.

Table 1 Requirements of Jute Bags
(Clauses 4.1 and 5.1)

| Sl No. | Characteristic | Requirement | | Tolerance | Method of Test, Ref to Clause of IS 9113 |
|--------|---|--------------------|-------------|--|--|
| | | Type A | Type B | | |
| (1) | (2) | (3) | (4) | (5) | (6) |
| i) | Dimensions (see Note 1): | | | | 8.3.2 |
| | a) Outside length, cm | 94 | 94 | +4 -0 cm | |
| | b) Outside width, cm | 57 | 57 | +4 -0 cm | |
| ii) | Ends/dm | 46 | 76 | Type A ± 2 Type B + ₋₃ ⁺⁴ | 8.4.2 |
| iii) | Picks/dm | 50 (2 \times 25) | 28 | ± 2 | 8.4.2 |
| iv) | Corrected mass/bag, g (see Note 2) | 665 | 665 | +8.0 -6.0 percent | 8.5.2 |
| v) | Average breaking strength of sacking (ravelled-strip method, 10 cm \times 20 cm), <i>Min</i> , N (kgf): | | | | 8.6.2 |
| | a) Warpway | 1 570 (160) | 1 570 (160) | | |
| | b) Weftway | 1420 (145) | 1420 (145) | | |
| vi) | Average side seam strength (5 cm \times 20 cm raveled strip), <i>Min</i> , N (kgf) | 490 (50) | 490 (50) | | 8.7 |
| vii) | Moisture regain, percent, <i>Max</i> (see Note 3) | 22 | 22 | | 8.2 |
| viii) | Oil content on dry de-oiled material, Max | 3 | 3 | | 8.8 |

NOTES

1 The bags of specified dimensions are suitable for packing of 50 kg wheat, rice and similar coarse grains. For packing of other quantities/materials, the buyer and the seller may agree to the dimensions other than those specified above. The mass of such bags may be calculated by the method given in 5.2 of IS 9113. However, tolerances specified in this table for dimension and on the mass shall be permissible.

2 Average moisture regain shall be maximum 22 percent. However, 10 percent of the individual value of moisture regain percent may be above 22 percent with an upper limit of 26 percent.

3 Moisture regain shall not be measured on the branding. It shall be measured at least 10 cm away from the branding.

5.4.1.3 The product packaging may display in brief the criteria based on which the product has been labelled environment friendly.

5.4.1.4 The material used for product packaging shall be reusable or made from recyclable or biodegradable materials.

5.4.1.5 Fatty alcohol based non-ionics as emulsifier should be used, wherever required.

5.4.1.6 Polyhalogenated based phenolic fire retardants shall not be used.

5.4.2 Specific Requirements

5.4.2.1 The bags shall confirm to the requirements given in Table 3.

6 PACKING

The bags shall be packed in bales as prescribed in IS 2873 or as specified in the agreement between the buyer and the seller.

7 MARKING

7.1 The bales shall be marked as prescribed in IS 2873. Additional markings shall be made as

stipulated by the buyer or required by regulation or law in force.

7.2 BIS Certification Marking

The bales may also be marked with the Standard Mark.

7.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7.3 The bales may also be marked with ECO-Mark in addition to Standard Mark, if the requirements specified in 5.4 are also satisfied.

8 SAMPLING AND CRITERIA FOR CONFORMITY

8.1 Lot

All bales of jute bags of same size produced under similar conditions of production and delivered to a buyer against one dispatch note shall constitute a lot.

Table 2 Requirements of Packed Bales
(Clause 5.2)

| Sl No. | Characteristic | Requirement | Method of Test, Ref to Clause of IS 9113 |
|--------|--|-----------------------------|--|
| (1) | (2) | (3) | (4) |
| i) | Total number of bags per bale (<i>see</i> Note 1) | 500 | 8.9 |
| ii) | Number of bags per bundle | 25 | — |
| iii) | Contract mass of a bale, kg (<i>see</i> Note 2) | 332.5 | — |
| iv) | Corrected net mass of a bale, kg | Not less than contract mass | 8.1 |
| v) | Number of joined bags per bundle of 25 bags | 1 | Visual |

NOTES

1 The number of bags per bale shall be 500 or as specified in an agreement between the buyer and the seller.

2 Contract mass of a bale is calculated as follows:
Contract mass of a bale = Nominal mass of bag × Specified number of bags per bale

8.2 Sample Size and Criteria for Conformity

For assessing the conformity of lot to the requirements of this standard, bales shall be first selected from each lot at random in accordance with the col 2 and col 3 of Table 4. All the bales so selected in the sample shall be tested for ‘Gross mass of bales’, ‘Tare mass of bailing hoops and other packing materials’ and ‘Number of bundles per bale’. Two bundles of bags selected at random from each bale selected in the sample shall be tested for total number of bags per bundle. The lot shall be considered as conforming to the requirements of this standard, if all the following conditions are satisfied:

- Total corrected net mass of all the bales in the sample is not less than the total mass of all the bales.
- Total number of bags in each bale selected as per 8.2 meet the relevant requirement.

8.3 Sample Size for Bags

For freedom from defects, length, width, ends/dm, picks/dm, number of stitch/dm, mass per bag and

moisture regain, 7 bags shall be selected at random from each of the bales selected as per 8.2. The total number of bags to be tested from each lot for these requirements is given in col 5 of Table 4.

8.4 Criteria for Conformity

8.4.1 Criteria for Conformity for Freedom from Defects

Each bag selected in the sample shall be tested for freedom from defects. A bag shall be termed as defective, if it contains two or more major defects (*see* Annex A). A lot shall be considered conforming to this requirement, if the number of defectives is less than or equal to the acceptance number given in col 6 of Table 4. Acceptance numbers given in Table 4 are on the basis of an AQL of 4.0 percent.

8.4.2 Criteria for Conformity for Length and Width

The dimension of at least 90 percent of the bags under test shall be in accordance with the requirement specified. Out of the remaining bags (10 percent, *Max*), dimension of not a single bag is below the specified nominal value by more than 2.0 cm and 1.0 cm in case of length and width respectively.

Table 3 Specific Requirements for ECO-Mark
(Clause 5.4.2.1)

| Sl No. | Parameter ¹⁾ | Maximum Limit, Hessians and Sackings mg/kg (ppm) |
|--------|--|--|
| (1) | (2) | (3) |
| i) | Non-halogenated hydrocarbons | 3 percent |
| ii) | a) Pesticides (Sum parameter) ²⁾ | 1.0 |
| | b) Banned Pesticides | Nil (Below detectable limit) |
| iii) | pH of aqueous extract | 6.0-7.0 |
| iv) | Coupled aminess from azo-dyes (Sum parameters) ³⁾ | 50.0 (Detectable limit using GC-MS) |

¹⁾ The methods of tests for ECO-parameters are being developed by BIS and Textiles Committee. Till the methods of tests are standardized, the manufacturer shall declare conformance taking into consideration the chemicals, auxiliaries and dyes used.

²⁾ The list of pesticides used on jute, banned restricted or withdrawn is appended as Annex B.

³⁾ The list of coupled amines released from azo-dyes is appended as Annex C.

8.4.3 Criteria for Conformity for Ends/dm, Picks/dm, Number of Stitches/dm and Moisture Regain

The lot which meets the requirements of **8.4.1** and **8.4.2** shall be tested for ends/dm, picks/dm, number of stitches/dm and moisture regain as per the plan. A bag shall be termed as defective, if it fails to meet any one or more of these requirements. The lot shall be considered as conforming to the requirements of ends/dm, picks/dm, number of stitches/dm and moisture regain, if the total number of defective found in the sample is less than or equal to the corresponding acceptance number given in col 6 of Table 4.

8.4.4 Criteria for Conformity for Mass per Bag

The lot, which meets the above requirements, shall then be tested for mass of bag. The lot shall be declared as conforming to this requirement, if

- a) the average corrected value of mass per bag as obtained for sampled bags under test is not less than nominal value specified.
- b) the corrected mass of at least 80 percent of bags under test is in accordance with requirement specified.
- c) out of remaining bags (20 percent, *Max*), all bags may have corrected mass above the specified limit, but corrected mass of not more than 10 percent of sampled bags under test is below the specified value by more than 12 percent of specified nominal value.'

8.5 Sample Size and Criteria for Conformity for Breaking Strength Requirement

The lot, which meets the above requirements shall then be tested for breaking strength requirements. For this purpose, one bag shall be selected at random from each bale selected in the sample. Suitable test specimens shall be taken from these bags and tested for warpway, weftway and seam strength. The lot shall be declared as conforming to these requirements, if

- a) average values of warp way, weftway and seam breaking strengths respectively, as obtained for all test specimens are not less than the corresponding values specified, and
- b) none of the individual value is less than 20 percent below the specified value.

8.6 Sample Size and Criteria for Conformity for Oil Content

The lot, which meets the above requirements, shall then be tested for oil content. For this purpose two bags shall be selected out of two different bales selected as per **8.2**. The lot shall be declared as conforming to this requirement, if both the bags meet the requirement of oil content.

8.7 The lot shall be considered as conforming to the requirements of this standard, if **8.2** and **8.4** to **8.6** are satisfied.

Table 4 Sample Size and Acceptance Numbers
(Clauses 8.2, 8.3, 8.4.1 and 8.4.3)

| Sl No. | No. of Bales in the Lot | No. of Bales in the Sample | For Number of Stitches/dm, Ends/dm, Picks/dm, Moisture Regain | | |
|--------|-------------------------|----------------------------|---|--------------------------------|-------------------|
| | | | No. of Bags from Each Bale | Total Number of Bags in Sample | Acceptance Number |
| (1) | (2) | (3) | (4) | (5) | (6) |
| i) | Up to 25 | 5 | 7 | 35 | 5 |
| ii) | 26 to 90 | 8 | 7 | 56 | 6 |
| iii) | 91 to 300 | 12 | 7 | 84 | 8 |
| iv) | 301 to 500 | 18 | 7 | 126 | 10 |

NOTE — If the number of bales in a consignment exceeds 500, the same shall be split into number of lots each comprising maximum of 500 bales. Joined bags shall also be drawn during sampling of bags for visual inspection and breaking strength test.

ANNEX A

(Clauses 4.5 and 8.4.1)

CLASSIFICATION OF DEFECTS

| <i>Type of Defect</i> | <i>Description</i> | <i>Major</i> | <i>Minor</i> |
|------------------------------------|---|---|--------------|
| GAW | Portion over the whole width of the fabric completely unwoven with weft | > 1.5 cm 0.5 cm to 1.5 cm | x X |
| Multiple broken/missing warp (end) | Two or more contiguous, regardless of length | x | |
| Multiple broken weft (pick) | Two or more contiguous, regardless of length One pick, full width | x | X |
| Cut, hole, tear or patch | Two or more warp or filling threads ruptured at adjoining points | x | |
| Float | A place in the fabric where warp and weft yarns escape the required interlacement | > 2 cm ² 0.5 cm ² to 2 cm ² | x X |
| Gap stitching | Stitches missing | > 1.5 cm 0.5 cm to 1.5 cm | x X |
| Corner gap | Corner of the bag not properly stitched resulting in formation of hole | > 1.5 cm 0.5 cm to 1.5 cm | x X |
| Mildew | Staining of fabric due to fungal or bacterial growth visible to naked eye | x | |

NOTES

1 x – Major defects.

X – Minor defects.

2 Two minor defects shall be counted as one major defect.

ANNEX B

(Table 3)

LIST OF PESTICIDES USED ON JUTE - BANNED, RESTRICTED OR WITHDRAWN

B-1 PESTICIDES REGISTERED FOR USE ON JUTE IN INDIA AS ON 10.04.1992

- a) Herbicides : Dalapon
- b) Fungicides : Carbendazim
- c) Insecticides: Carbaryl, Carbofuran, Endosulfan, Lindane, Phosalone, Quinalphos

B-2 EXTRACT FROM LIST OF PESTICIDES NOT APPROVED, RESTRICTED USE, WITHDRAWN OR BANNED IN THE COUNTRY**B-2.1 Pesticides not Approved for Use**

2,4, 5-Trimethylaniline

B-2.2 Pesticides Restricted for Use

Use of DDT in agriculture is banned. In very special circumstances warranting the use of DDT for plant protection, the State or Central Government may purchase it directly from M/s Hindustan Insecticides Ltd, to be used under expert Government supervision.

IS 12650 : 2018

Use of DDT for public health programme up to 10 000 MT per annum, except in case of any major outbreak, is restricted.

Use of Dieldrin shall be restricted for Locust Control in

desert areas by Plant Protection Advisor to the Government of India.

B-2.3 Pesticides Banned/Withdrawn

Pentachlorophenol, Toxaphene and Aldrin.

ANNEX C

(Table 3)

LIST OF COUPLED AMINES RELEASED FROM AZO-DYES

- | | |
|----------------------------------|---|
| a) 4-Aminodiphenyl | n) 3,3' – Dimethylbenzidine |
| b) 2-Amino-4 -nitrotoluene | p) 3,3' – Dimethyl-4,4' diaminodiphenylmethane |
| c) Benzidine | q) <i>p</i> -kresidin (2-Methoxy 5-methylaniline) |
| d) 4-Chloro- <i>o</i> -toluidine | r) 4,4' Methylene-bis-(2 -chloraniline) |
| e) 2-Naphylamine | s) 4,4' Oxydianiline |
| f) <i>o</i> -Aminoazotoluene | t) 4,4' Thiodianiline |
| g) <i>p</i> -Chloraniline | u) <i>o</i> -Toluidine |
| h) 2,4-Diaminoanisole | v) 2,4, – Toluylenediamine |
| j) 4,4' – Diaminodiphenylmethane | w) 2,4,5 – Trimethylaniline |
| k) 3,3' – Dichlorobenzidine | y) <i>p</i> -Amino-azobezene |
| m) 3,3' – Dimethoxybenzidine | z) 2-Methoxyaniline |

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This Indian Standard has been developed from Doc No.: TXD 03 (10772).

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मानक

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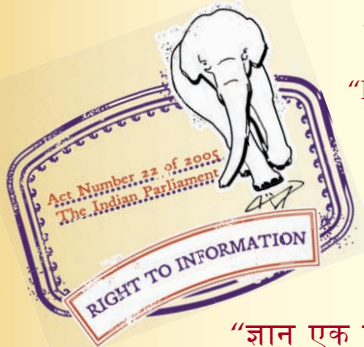
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IS 15138 (2010): TEXTILES – JUTE BAGS FOR PACKING 50 kg
SUGAR – SPECIFICATION [TXD 3: Jute and Jute Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक
वस्त्रादि — 50 कि०ग्रा० चीनी पैक करने
के लिए पटसन के बोरे — विशिष्ट
(पहला पुनरीक्षण)

Indian Standard
TEXTILES — JUTE BAGS FOR PACKING
50 kg SUGAR — SPECIFICATION
(*First Revision*)

ICS 55.080; 59.060.10; 67.180.10

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BUREAU OF INDIAN STANDARDS
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FOREWORD

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

This standard was first published in 2002. This revision has taken place to incorporate the following major changes:

- a) Tolerances on length, width and mass of bag have been reduced for improved structure and serviceability;
- b) Sampling and criteria for conformity have been modified; and
- c) Classified major and minor defects have been incorporated to minimize failures during storage and end use.

The types of bags specified in this standard have been developed after extensive trials keeping in view the guidelines provided by the International Labour Organization (ILO) for not permitting manual carriage of weight exceeding 50 kg by the workers and consumers for their safety. In addition, care has been taken to restrict the use of batching oil in the manufacture of bags to safer limit so as to minimize its adverse impact on the contents. One of the varieties also specifies a food grade loose liner to be used in order to protect the contents from adverse impact of oil and moisture.

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

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
TEXTILES — JUTE BAGS FOR PACKING
50 kg SUGAR — SPECIFICATION
(First Revision)

1 SCOPE

This standard prescribes constructional details and other requirements of three types of jute bags for packing 50 kg sugar.

2 REFERENCES

The standards listed in Annex A 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 the standards indicated at Annex A.

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5476 shall apply.

4 MANUFACTURE**4.1 Fabric**

Type A bags shall be made from single piece of 568 g/m² double warp, plain weave jute fabric of uniform construction with warp running along the length of the bag. Type B and Type C bags shall be made from hessian having mass of 417 g/m² and 354 g/m² respectively. The cloth shall be without stripes or shall have stripes as agreed to between the buyer and the seller, woven along the length of the bag.

NOTE — Mass of fabric is for guidance only.

4.1.1 The jute bags used for packing food items, such as sugar shall be manufactured from raw jute of Indian origin.

4.2 Seam

The sides of Type A bag shall be herakle stitched with safety stitch as specified in 5.1.4 of IS 9113. The side of Type B and Type C bags shall be sewn with herakle stitches on selvedge through two layers and the bottom raw edge shall be folded inside to a depth of at least 3.8 cm and then stitched at the mouth as specified in 5.1.3 of IS 9113. The number of stitches per 10 cm shall be between 9 and 11.

4.3 Hemming at the Mouth

Provisions of 5.1.3 of IS 9113 shall apply.

4.4 Freedom from Defects

The bags shall meet the requirement of freedom from defects as given in Annex B.

4.5 Liner

Type C bags shall be provided with minimum 25µm thick loose liner made of food grade virgin HMHDPE conforming to IS 10146.

5 SPECIFIC REQUIREMENTS

5.1 The bags shall conform to the requirements specified in Table 1.

5.2 Tolerance

The following tolerance shall be permitted on outside length, outside width, ends/dm, picks/dm and corrected mass per bag as given in Table 1.

| Sl No. | Characteristic(s) | Tolerance | | |
|--------|---|--------------|--------------|--------------|
| | | Type A Bag | Type B Bag | Type C Bag |
| (1) | (2) | (3) | (4) | (5) |
| i) | Outside length and outside width, cm | ← +3 → | | |
| ii) | Ends/dm | +4 -2 | ± 2 | ± 2 |
| iii) | Picks/dm | +2 -1 | +2 -1 | +2 -1 |
| iv) | Corrected mass per bag, percent, <i>Max</i> | +7.5 -6.0 | +7.5 -2.0 | +7.5 -2.0 |

5.3 The bales containing the bags shall conform to the requirements specified in Table 2.

6 PACKING

The bags shall be packed in bales as prescribed in IS 2873 or as specified in the agreement between the buyer and the seller.

7 MARKING

The bales shall be marked as prescribed in IS 2873.

Table 1 Requirements of Bags
(Clause 5.1)

| Sl No. | Characteristic | Requirement | | | Method of Test (Ref to Cl of IS 9113) |
|--------|--|---------------|---------------|-------------------|---|
| | | Type A (3) | Type B (4) | Type C (5) | |
| (1) | (2) | | | | (6) |
| i) | Dimensions, cm (<i>see</i> Note 1) : | | | | |
| | a) Outside length | 87.5 | 91.5 | 91.5 | 8.3.2 |
| | b) Outside width | 58.5 | 56.0 | 56.0 | 8.3.2 |
| ii) | Ends/dm | 68 | 47 | 47 | 8.4.2 |
| iii) | Picks/dm | 31 | 55 | 47 | 8.4.2 |
| iv) | Corrected mass per bag, g | 630 | 475 | 405 + 32 liner | 8.5.2 |
| v) | Average breaking load of sacking (ravelled strip method, 5.0 cm × 20.0 cm), <i>Min</i> , N (kgf) : | | | | |
| | a) Warpway | 1 570 (160) | 1 470 (150) | 1 470 (150) | |
| | b) Weftway | 1 420 (145) | 1 765 (180) | 1 420 (145) | 8.6.2 |
| vi) | Average breaking load of seam (ravelled strip method, 5.0 cm × 20.0 cm), <i>Min</i> , N (kgf) : | | | | |
| | a) Warpway | — | 490 (50) | 490 (50) | |
| | b) Weftway | 440 (45) | 685 (70) | 490 (50) | 8.7 |
| vii) | Moisture regain : | | | | |
| | a) Moisture regain, percent, <i>Max</i> (<i>see</i> Note 2) | 22 | 17 | 17 | 8.2 |
| | b) Contract moisture regain, percent | 20 | 16 | 16 | — |

NOTES

1 The bags of specified dimensions are suitable for packing of sugar. However, other dimensions as per agreement between the buyer and the seller may also be used provided the tolerance on dimensions and bag mass as given in 5.2 is complied with. The mass of such bags shall be calculated by the method given in 5.3 of IS 9113.

2 Average moisture regain shall be maximum 22 percent. However, 10 percent of the individual value of moisture regain percent may be above 22 percent with an upper limit of 26 percent.

Table 2 Requirements of Packed Bales
(Clause 5.3)

| Sl No. | Characteristic | Requirement | Method of Test (Ref to Cl of IS 9113) |
|--------|--|--|--|
| (1) | (2) | (3) | (4) |
| i) | Total number of bags per bale (<i>see</i> Note) | 500 | 8.9 |
| ii) | Number of joined bags per bundle of 25 bags | 4 | — |
| iii) | Contract mass of a bale, kg | 315 (Type A) 237.5 (Type B) 218.5 (Type C) | — |
| iv) | Corrected net mass of a bale | Not less than the contract mass | 8.1 |
| v) | Oil content on dry deoiled material basis, percent, <i>Max</i> | 3 | 8.8 |

NOTE — The number of bags per bale shall be 500 or as specified in an agreement between the buyer and the seller.

Additional markings including the country of origin shall be made as stipulated by the buyer or required by the regulation or law in force.

7.1 BIS Certification Marking

The bales may also be marked with the Standard Mark.

7.1.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986*

and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

8 SAMPLING AND CRITERIA FOR CONFORMITY

8.1 Lot

All bales of jute bags of same size produced under similar conditions of production and delivered to a buyer against one dispatch note shall constitute a lot.

8.2 Sample Size and Criteria for Conformity

For assessing the conformity of lot to the requirements of this standard, bales shall be first selected from each lot at random in accordance with the col 2 and col 3 of Table 3. All the bales so selected in the sample shall be tested for 'Gross mass of bales', 'Tare mass of bailing hoops and other packing materials' and 'Number of bundles per bale'. Two bundles of bags selected at random from each bale selected in the sample shall be tested for total number of bags per bundle.

The lot shall be considered as conforming to the requirements of this standard, if all the following conditions are satisfied:

- a) The total corrected net mass of all the bales in the sample is not less than the total contract mass of all the bales.
- b) The total number of bags in each bale selected as per 8.2 under test meets the relevant requirement.

8.3 Sample Size for Bags

For freedom from defects, length, width, ends/dm, picks/dm, number of stitch/dm, mass per bag and moisture regain, 16 bags shall be selected at random from each of the bales selected as per 8.2. The total number of bags to be tested from each lot for these requirements is given in col 5 of Table 3

8.4 Criteria for Conformity

8.4.1 Criteria for Conformity for Freedom from Defects

Each bag selected in the sample shall be tested for freedom from defects. A bag shall be termed as defective, if it contains two or more major defects (*see Annex B*). A lot shall be considered conforming to this requirement, if the number of defectives is less than or equal to the acceptance number given in col 6 of Table 3. Acceptance numbers given in Table 3 are on the basis of an AQL of 2.5 percent.

8.4.2 Criteria for Conformity for Length, Width, Ends/dm, Picks/dm, Number of Stitches/dm and Moisture Regain

The lot, which meets requirements of 8.4.1, shall be tested for length, width, ends/dm, picks/dm, number of stitches/dm and moisture regain as per the plan. A bag shall be termed as defective, if it fails to meet any one or more of these requirements. The lot shall be considered as conforming to the requirements of length, width, ends/dm, picks/dm, stitches/dm and moisture regain, if the total number of defectives found in the sample is less than or equal to the corresponding acceptance number given in col 6 of Table 3.

8.4.3 Criteria for Conformity for Mass of Fabric

The lot, which meets the above requirement, shall then be tested for mass of fabric. The lot shall be declared as conforming to this requirement, if

- a) the average value of mass per bag, as obtained for sampled bags is not less than the nominal value specified; and
- b) not more than 10 percent of the individual values of mass of bags is below the lower specified value.

8.5 Sample Size and Criteria for Conformity for Breaking Strength Requirement

The lot, which meets the above requirements, shall then be tested for breaking strength requirements. For this purpose, one bag shall be selected at random from each bale selected in the sample. Suitable test specimens shall be taken from these bags and tested for warpway, weftway and seam strength. The lot shall be declared as confirming to these requirements, if

- a) the average values of warpway, weftway and seam breaking strengths respectively, as obtained for all test specimens are not less than the corresponding values specified; and
- b) none of the individual value is less than 20 percent below the specified value.

8.6 Sample Size and Criteria for Conformity for Oil Content

The lot, which meets the above requirements, shall then be tested for oil content. For this purpose two bags shall be selected out of two different bales selected as per 8.2. The lot shall be declared as conforming to this requirement, if both the bags meet the requirement of oil content.

8.7 The lot shall be considered as conforming to the requirements of this standard, if 8.2 and 8.4 to 8.6 are satisfied.

Table 3 Sample Size and Acceptance Numbers

(Clauses 8.2, 8.3, 8.4.1 and 8.4.2)

| Sl No. | No. of Bales in the Lot | No. of Bales in the Sample | For Length, Width, Number of Stitches/dm, Ends/dm, Picks/dm, Moisture Regain | | |
|--------|-------------------------|----------------------------|--|--------------------------------|-------------------|
| | | | No. of Bags from Each Bale | Total Number of Bags in Sample | Acceptance Number |
| (1) | (2) | (3) | (4) | (5) | (6) |
| i) | Up to 25 | 5 | 16 | 80 | 5 |
| ii) | 26 to 90 | 8 | 16 | 128 | 7 |
| iii) | 91 to 300 | 13 | 16 | 208 | 10 |
| iv) | 301 to 500 | 20 | 16 | 320 | 14 |

NOTES

1 If the number of bales in a consignment exceeds 500, the same shall be split into number of lots each comprising maximum of 500 bales.

2 Joined bags shall also be drawn for visual inspection and breaking strength.

ANNEX A
(Clause 2)

LIST OF REFERRED INDIAN STANDARDS

| <i>IS No.</i> | <i>Title</i> | <i>IS No.</i> | <i>Title</i> |
|---------------|---|---------------|--|
| 2873 : 1991 | Textiles — Packaging of jute products in bales — Specification (<i>second revision</i>) | 9113 : 1993 | Textiles — Jute sacking — General requirements (<i>first revision</i>) |
| 5476 : 1986 | Glossary of terms relating to jute (<i>first revision</i>) | 10146 : 1982 | Specification for polyethylene for its safe use in contact with foodstuffs, Pharmaceuticals and drinking water |

ANNEX B

(Clauses 4.4 and 8.4.1, and Table 4)

CLASSIFICATION OF DEFECTS

B-1 The detailed classification of defects is given in Table 4.

Table 4 Classification of Defects

| Sl No. | Type of Defect | Description | Major | Minor | |
|--------|------------------------------------|---|--|-------|---|
| (1) | (2) | (3) | (4) | (5) | |
| i) | GAW | Portion over the whole width of the fabric completely unwoven with weft | >1.5 cm | x | — |
| | | | 0.5-1.5 cm | — | X |
| ii) | Multiple broken/missing warp (End) | Two or more contiguous, regardless of length | x | — | |
| iii) | Multiple broken weft (Pick) | Two or more contiguous, regardless of length | x | — | |
| | | One pick, full width | — | X | |
| iv) | Cut, hole, tear or patch | Two or more warp or filling threads ruptured at adjoining points | x | — | |
| v) | Float | A place in the fabric where warp and weft yarns escape the required interlacement | > 2 cm ² | x | — |
| | | | 0.5 cm ² to 2 cm ² | — | X |
| vi) | Gap stitching | Stitches missing | > 1.5 cm | x | — |
| | | | 0.5-1.5 cm | — | X |
| vii) | Corner gap | Corner of the bag not properly stitched resulting in formation of hole | > 1.5 cm | x | — |
| | | | 0.5-1.5 cm | — | X |
| viii) | Mildew | Staining of fabric due to fungal or bacterial growth visible to naked eye. | x | — | |

NOTE — Two minor defects shall be counted as one major defect.

ANNEX C

(Foreword)

COMMITTEE COMPOSITION

Jute and Jute Products Sectional Committee, TXD 03

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| Directorate General of Supplies & Disposals, Quality Assurance Wing, New Delhi | SHRI A. K. NANDI (<i>Alternate</i>) |
| Eskaps (India) Private Ltd, Kolkatta | SHRI A. J. BAJAJ |
| Export Inspection Council of India, New Delhi | SHRI R. P. SINGH (<i>Alternate</i>) |
| Food Corporation of India, New Delhi | SHRI S. K. CHATTERJEE |
| Indian Jute Industries' Research Association, Kolkatta | SHRI ARBINDA KAR (<i>Alternate</i>) |
| Indian Jute Mills Association, Kolkatta | SHRI R. N. DAS |
| Indian Institute of Technology, Kharagpur | SHRI S. P. BHATTACHARYA (<i>Alternate</i>) |
| Indian Sugar Mills Association, New Delhi | SHRI S. S. GREWAL |
| Industrial Toxicological Research Centre, Lucknow | SHRI I. K. NEGI (<i>Alternate</i>) |
| Institute of Jute Technology, Kolkatta | SHRI P. K. CHOUDHURY |
| Ludlow Jute Mills, Kolkatta | SHRI S. K. CHAKRABARTI (<i>Alternate</i>) |
| Ministry of Consumer Affairs, Food & Public Distribution, New Delhi | SHRI S. K. GHOSH |
| National Federation of Cooperative Sugar Co Ltd, New Delhi | SHRI H. N. GHOSH (<i>Alternate</i>) |
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बोरे— विशिष्टि

**Textiles — Light Weight Jute
Sacking Bags for Packing 50 kg
Foodgrains — Specification**

ICS 55.080; 59.060; 67.060

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DEVELOPMENT PURPOSE ONLY

Indian Standard

TEXTILES — LIGHT WEIGHT JUTE SACKING BAGS FOR PACKING 50 kg FOODGRAINS — SPECIFICATION

1 SCOPE

This standard prescribes constructional details and other requirements of light weight jute sacking bags for packing 50 kg foodgrains.

2 REFERENCES

The following standards 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 the standards indicated below.

| <i>IS No.</i> | <i>Title</i> |
|---------------|---|
| 2873 : 1991 | Textiles — Packaging of jute products in bales — Specification (<i>second revision</i>) |
| 5476 : 1986 | Glossary of term relating to jute (<i>first revision</i>) |
| 9113 : 1993 | Textiles — Jute sacking — General requirements (<i>first revision</i>) |

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5476 shall apply.

4 MANUFACTURE

4.1 The bags shall be made from single piece of twill weave jute sacking of uniform construction as given below with warp running along the length of the bag:

Type A — Single warp, double weft woven on modern shuttleless loom.

Type B — Double warp, single weft woven on conventional shuttle loom.

There shall be a single blue stripe, or stripes woven along the length of the bag or the bag shall be without stripe as agreed to between the buyer and the seller. The constructional particulars of sacking used in the fabrication of the bags shall be such that the bags meet the requirements specified in Table 1.

4.2 Seam

The two sides of the bags shall be sewn with herakle stitches on selvedge through two layers of sacking as

specified in IS 9113. The number of stitches per decimetre shall be 10 ± 1 .

4.3 Safety Stitch

If agreed to between the buyer and the seller, a line of safety union stitch shall be provided at the inner edges of the herakle stitches (*see* IS 9113). The number of safety union stitches per decimetre shall be 10 ± 1 .

4.4 Hemming at the Mouth

Provisions of IS 9113 shall apply.

4.5 Freedom from Defects

The bags shall meet the requirement of freedom from major defects as given in Annex A.

5 SPECIFIC REQUIREMENTS

5.1 The bags shall conform to the requirements specified in Table 1.

5.2 The bales containing the bags shall also conform to the requirements specified in Table 2.

5.3 The contract moisture regain shall be 20 percent.

5.4 Additional Requirements for Labelling as Environment Friendly Products

5.4.1 General Requirement

5.4.1.1 The bags shall conform to the requirements for quality and performance prescribed under **5.1** to **5.3**.

5.4.1.2 The manufacturers shall produce to BIS, environmental consent clearance from the concerned State Pollution Control Board as per the provisions of *Water (Prevention and Control of Pollution) Act, 1974* and *Air (Preventions and Control of Pollution) Act, 1981* alongwith the authorization, if required under the *Environment (Products) Act, 1986* and the Rules made thereunder, while applying for ECO-Mark. Additionally, the manufacturer shall produce documentary evidence on compliance of the provisions related to noise level and occupational health under the provisions of *Factory Act, 1948* and Rules made thereunder.

5.4.1.3 The product packaging may display in brief the criteria based on which the product has been labelled environment friendly.

Table 1 Requirements of Jute Bags
(Clauses 4.1 and 5.1)

| Sl No. | Characteristic | Requirement | | Tolerance | Method of Test, Ref to Cl of IS 9113 |
|--------|--|-------------|-------------|--------------------------------|--------------------------------------|
| | | Type A (3) | Type B (4) | | |
| (1) | (2) | (3) | (4) | (5) | (6) |
| i) | Dimensions (<i>see</i> Note 1) : | | | | 8.3.2 |
| | a) Outside length, cm | 94 | 94 | + 4 cm - 0 | |
| | b) Outside width, cm | 57 | 57 | + 4 cm - 0 | |
| ii) | Ends/dm | 46 | 64 | + 4 - 3 | 8.4.2 |
| iii) | Picks/dm | 50 | 28 | + 2 - 2 | 8.4.2 |
| iv) | Corrected mass/bag, g (<i>see</i> Note 2) | 580 | 580 | + 8.0 Percent - 6.0 Percent | 8.5.2 |
| v) | Average breaking strength of sacking (ravelled-strip method, 10 cm × 20 cm), <i>Min</i> , N (kgf): | | | | 8.6.2 |
| | a) Warpway | 1 570 (160) | 1 570 (160) | | |
| | b) Weftway | 1 420 (145) | 1 420 (145) | | |
| vi) | Average seam strength (5 cm × 20 cm ravelled strip), <i>Min</i> N (kgf) | 490 (50) | 490 (50) | | 8.7 |
| vii) | Moisture regain, percent, <i>Max</i> | 22 | 22 | | 8.2 |
| viii) | Oil content on dry de-oiled material, <i>Max</i> | 3 | 3 | | 8.8 |

NOTES

1 The bags of specified dimensions are suitable for packing of wheat, rice and similar coarse grains. For packing of other materials, the buyer and the seller may agree to the dimensions other than those specified above. The mass of such bags may be calculated by the method given in 5.3 of IS 9113. However, tolerances specified in this table for dimension and on the mass shall be permissible.

2 Average moisture regain shall be maximum 22 percent. However, 10 percent of the individual value of moisture regain percent may be above 22 percent with an upper limit of 26 percent.

Table 2 Requirements of Packed Bales
(Clause 5.2)

| Sl No. | Characteristic | Requirement | Method of Test, Ref to Cl of IS 9113 |
|--------|--|-----------------------------|--------------------------------------|
| (1) | (2) | (3) | (4) |
| i) | Total number of bags per bale (<i>see</i> Note 1) | 500 | 8.9 |
| ii) | Number of bags per bundle | 25 | — |
| iii) | Contract mass of a bale, kg (<i>see</i> Note 2) | 290 | — |
| iv) | Corrected net mass of a bale, kg | Not less than contract mass | 8.1 |
| v) | Number of joined bags per bundle of 25 bags | 1 | Visual |

NOTES

1 The number of bags per bale shall be 500 or as specified in an agreement between the buyer and the seller.

2 Contract mass of a bale is calculated as follows:

Contract mass of a bale = nominal mass of bag × specified number of bags per bale.

5.4.1.4 The material used for product packaging shall be reusable or made from recyclable or biodegradable materials.

5.4.1.5 Fatty alcohol based non-ionics as emulsifier should be used wherever required.

5.4.1.6 Polyhalogenated based phenolic fire retardants shall not be used.

5.4.2 Specific Requirements

5.4.2.1 The bags shall conform to the requirements given in Table 3.

6 PACKING

The bags shall be packed in bales as prescribed in IS 2873 or as specified in the agreement between the buyer and the seller.

Table 3 Specific Requirements for ECO-Mark
(Clause 5.4.2.1)

| SI No. | Parameter ¹⁾ | Maximum Limit, Hessians and Sackings mg/kg (ppm) |
|--------|---|--|
| (1) | (2) | (3) |
| i) | Non-halogenated hydrocarbons | 3 percent |
| ii) | Pesticides (Sum parameter) ²⁾ Banned Pesticides | 1.0 Nil (Below detectable limit) |
| iii) | pH of aqueous extract | 6.0-7.0 |
| iv) | Coupled aminess from azo-dyes (Sum parameters) ³⁾ | 50.0 (Detectable limit using GC-MS) |

¹⁾ The methods of tests for ECO-parameters are being developed by BIS and Textiles Committee. Till the methods of tests are standardized, the manufacturer shall declare conformance taking into consideration the chemicals, auxiliaries and dyes used.

²⁾ The list of pesticides used on jute, banned restricted or withdrawn is appended as Annex B.

³⁾ The list of coupled amines released from azo-dyes is appended as Annex C.

7 MARKING

7.1 The bales shall be marked as prescribed in IS 2873. Additional markings shall be made as stipulated by the buyer or required by regulation or law in force.

7.2 BIS Certification Marking

The bales may also be marked with the Standard Mark.

7.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7.3 The bales may also be marked with ECO-Mark in addition to Standard Mark if the requirements specified in 5.4 are also satisfied.

8 SAMPLING AND CRITERIA FOR CONFORMITY

8.1 Lot

All bales of jute bags of same size produced under similar conditions of production and delivered to a buyer against one dispatch note shall constitute a lot.

8.2 Sample Size and Criteria for Conformity

For assessing the conformity of lot to the requirements of this standard, bales shall be first selected from each lot at random in accordance with the col 2 and 3 of Table 4. All the bales so selected in the sample shall be tested for 'Gross mass of bales', 'Tare mass of bailing hoops and other packing materials' and 'Number of bundles per bale'. Two bundles of bags selected at random from each bale selected in the sample shall be tested for total number of bags per bundle. The lot shall be considered as conforming to the requirements of this standard if all the following conditions are satisfied:

- Total corrected net mass of all the bales in the sample is not less than the total mass of all the bales.
- Total number of bags in each bale selected as per 8.2 meet the relevant requirement.

8.3 Sample Size for Bags

For freedom from defects, length, width, ends/dm, picks/dm, number of stitch/dm, mass per bag and moisture regain, 16 bags shall be selected at random from each of the bales selected as per 8.2. The total number of bags to be tested from each lot for these requirements is given in col 5 of Table 4.

8.4 Criteria for Conformity

8.4.1 Criteria for Conformity for Freedom from Defects

Each bag selected in the sample shall be tested for freedom from defects. A bag shall be termed as defective, if it contains two or more major defects (*see*

Table 4 Sample Size and Acceptance Numbers
(Clauses 8.2, 8.3, 8.4.1 and 8.4.2)

| SI No. | No. of Bales in the Lot | No. of Bales in the Sample | For Length, Width, Number of Stitches/dm, Ends/dm, Picks/dm, Moisture Regain | | |
|--------|-------------------------|----------------------------|--|--------------------------------|-------------------|
| | | | No. of Bags from Each Bale | Total Number of Bags in Sample | Acceptance Number |
| (1) | (2) | (3) | (4) | (5) | (6) |
| i) | Up to 25 | 5 | 16 | 80 | 5 |
| ii) | 26 to 90 | 8 | 16 | 128 | 7 |
| iii) | 91 to 300 | 13 | 16 | 208 | 10 |
| iv) | 301 to 500 | 20 | 16 | 320 | 14 |

NOTE — If the number of bales in a consignment exceeds 500, the same shall be split into number of lots each comprising maximum of 500 bales. Joined bags shall also be drawn during sampling of bags for visual inspection and breaking strength test.

Annex A). A lot shall be considered conforming to this requirement, if the number of defective is less than or equal to the acceptance number given in col 6 of Table 4. Acceptance number given in Table 4 is on the basis of an AQL of 2.5 percent.

8.4.2 *Criteria for Conformity for Length, Width, Ends/dm, Picks/dm, Number of Stitches/dm and Moisture Regain*

The lot which meets the requirements of **8.4.1** shall be tested for length, width, ends/dm, picks/dm, number of stitches/dm and moisture regain as per the plan. A bag shall be termed as defective, if it fails to meet any one or more of these requirements. The lot shall be considered as conforming to the requirements of length, width, ends/dm, picks/dm, stitches/dm and moisture regain, if the total number of defective found in the sample is less than or equal to the corresponding acceptance number given in col 6 of Table 4.

8.4.3 *Criteria for Conformity for Mass per Bag*

The lot which meets the above requirements, shall then be tested for mass of bag. The lot shall be declared as conforming to this requirement if:

- a) Average value of mass per bag, as obtained for sampled bags is not less than the nominal value specified, and
- b) Not more than 10 percent of the individual values of mass of bags is below the lower specified value.

8.5 Sample Size and Criteria for Conformity for Breaking Strength Requirement

The lot, which meets the above requirements shall then be tested for breaking strength requirements. For this purpose, one bag shall be selected at random from each bale selected in the sample. Suitable test specimens shall be taken from these bags and tested for warpway, weftway and seam strength. The lot shall be declared as conforming to these requirements if :

- a) Average values of warpway, weftway and seam breaking strengths respectively, as obtained for all test specimens are not less than the corresponding values specified, and
- b) None of the individual value is less than 20 percent below the specified value.

8.6 Sample Size and Criteria for Conformity for Oil Content

The lot, which meets the above requirements, shall then be tested for oil content. For this purpose two bags shall be selected out of two different bales selected as per **8.2**. The lot shall be declared as conforming to this requirement, if both the bags meet the requirement of oil content.

8.7 The lot shall be considered as conforming to the requirements of this standard, if **8.2** and **8.4** to **8.6** are satisfied.

ANNEX A
(Clauses 4.5 and 8.4.1)
CLASSIFICATION OF DEFECTS

| Type of Defect | Description | | Major | Minor |
|------------------------------------|---|--|-------|-------|
| GAW | | > 1.5 cm | x | |
| | | 0.5 cm to 1.5 cm | | X |
| Multiple broken/missing warp (end) | Two or more contiguous, regardless of length | | x | |
| Multiple broken weft (pick) | Two or more contiguous, regardless of length | | x | |
| | One pick, full width | | | X |
| Cut, hole, tear or patch | Two or more warp or filling threads ruptured at adjoining points | | x | |
| Float | A place in the fabric where warp and weft yarns escape the required interlacement | > 2 cm ² | x | |
| | | 0.5 cm ² to 2 cm ² | | X |
| Gap stitching | Stitches missing | > 1.5 cm | x | |
| | | 0.5 cm to 1.5 cm | | X |
| Corner Gap | Corner of the bag not properly stitched resulting in formation of hole | > 1.5 cm | x | |
| | | 0.5 cm to 1.5 cm | | X |
| Mildew | Staining of fabric due to fungal or bacterial growth visible to naked eye | | x | |

NOTES

1 x — Major defects.

X — Minor defects.

2 Two minor defects shall be counted as one major defect.

ANNEX B

(Table 3)

**LIST OF PESTICIDES USED ON JUTE — BANNED,
RESTRICTED OR WITHDRAWN**

B-1 PESTICIDES REGISTERED FOR USE ON JUTE IN INDIA

HERBICIDES : Dalapon

FUNGICIDES : Carbendazim

INSECTICIDES : Carbaryl, Carbofuran,
Endosulfan, Lindane,
Phosalone, Quinalphos**B-2 EXTRACT FROM LIST OF PESTICIDES NOT APPROVED, RESTRICTED USE, WITHDRAWN OR BANNED IN THE COUNTRY AS ON 10.04.1992****B-2.1 Pesticides not Approved for Use**

2, 4, 5-T

B-2.2 Pesticides Restricted for Use

Use of DDT in agriculture is banned. In very special circumstances warranting the use of DDT for plant protection, the State or Central Government may purchase it directly from M/s Hindustan Insecticides Ltd, to be used under expert Government supervision. Use of DDT for public health programme up to 10 000 MT per annum, except in case of any major outbreak, is restricted.

Use of Dieldrin shall be restricted for Locust Control in desert areas by Plant Protection Advisor to the Government of India.

B-2.3 Pesticides Banned/Withdrawn

Pentachlorophenol, Toxaphene and Aldrin.

ANNEX C

(Table 3)

LIST OF COUPLED AMINES RELEASED FROM AZO — DYES

- | | |
|-----------------------------------|---|
| i) 4-Aminodiphenyl | xii) 3,3' — Dimethylbenzidine |
| ii) 2-Amino-4-nitrotouene | xiii) 3,3' — Dimethyl-4,4' diaminodiphenylmethane |
| iii) 13enzidine | xiv) <i>p</i> -kresidin (2-Methoxy 5-methylaniline) |
| iv) 4-Chloro- <i>o</i> -toluidine | xv) 4,4' Methylene-bis-(2-chloraniline) |
| v) 2-Naphy Iamine | xvi) 4,4' Oxydianiline |
| vi) <i>o</i> -Alminoazotolune | xvii) 4,4' Thiodianiline |
| vii) <i>p</i> -Chloraniline | xviii) <i>o</i> -Toluidine |
| viii) 2,4-Diaminoanisole | xix) 2,4, — Toluylenediamine |
| ix) 4,4' — Diaminodiphenylmethane | xx) 2,4,5 — Trimethylaniline |
| x) 3,3' — Dimethoxybenzidine | xxi) <i>p</i> -Amino-azobezene |
| xi) 3,3' — Dimethoxybenzidine | xxii) 2-Methoxyaniline |

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This Indian Standard has been developed from Doc No.: TXD 03 (1055).

Amendments Issued Since Publication

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AMENDMENT NO. 1 AUGUST 2016
TO
IS 16186 : 2014 TEXTILES — LIGHT WEIGHT JUTE SACKING BAGS FOR
PACKING 50 kg FOODGRAINS — SPECIFICATION

(Page 1, clause 4.1) — Substitute the following for the existing clause:

‘4.1 The bags shall be made from single piece of 2/1 twill weave sacking of uniform construction as given below having nominal mass of 504 g/m² with warp running along length of bag:

- a) *Type A* — Single warp, double weft woven on modern shuttleless loom.
- b) *Type B* — Double warp, single weft woven on conventional shuttle loom.

There shall be a single blue stripe, or stripes woven along the length of the bag or the bag shall be without stripe as agreed to between the buyer and the seller. The constructional particulars of sacking used in the fabrication of the bags shall be such that the bags meet the requirements specified in Table 1.’

[Page 2, Table 1, Sl No. (ii), (v) and (vi)] — Substitute the following for the existing:

Table 1 Requirements of Jute Bags
(Clauses 4.1 and 5.1)

| Sl No. | Characteristic | Requirement | | Tolerance | Method of Test, Ref to Clause of IS 9113 |
|--------|--|---------------|---------------|----------------------------|--|
| | | Type A (3) | Type B (4) | | |
| (1) | (2) | | | (5) | (6) |
| ii) | Ends/dm | 46 | 64 | Type A ±2 Type B +4 - 3 | 8.4.2 |
| v) | Average breaking strength of sacking (ravelled-strip method, 10 cm × 20 cm), <i>Min</i> , N (kgf): | | | | 8.6.2 |
| | a) Warpway | 1 225(125) | 1 225(125) | | |
| | b) Weftway | 1 225(125) | 1 225(125) | | |
| vi) | Average seam strength (5 cm × 20 cm ravelled strip), <i>Min</i> , N (kgf) | 431(44) | 431(44) | | 8.7 |

(Page 3, clauses 8.3, 8.4, 8.4.1, 8.4.2 and 8.4.3) — Substitute the following for the existing clauses:

8.3 Sample Size for Bags

For freedom from defects, length, width, ends/dm, picks/dm, number of stitch/dm, mass per bag and moisture regain, 7 bags shall be selected at random from each of the bales selected as per 8.2. The total number of bags to be tested from each lot for these requirements is given in col 5 of Table 4.

8.4 Criteria for Conformity

8.4.1 Criteria for Conformity for Freedom from Defects

Each bag selected in the sample shall be tested for freedom from defects. A bag shall be termed as defective, if it contains two or more major defects (*see* Annex A). A lot shall be considered conforming to this requirement, if the number of defectives is less than or equal to the acceptance number given in col 6 of Table 4. Acceptance numbers given in Table 4 are on the basis of an AQL of 4.0 percent.

8.4.1.1 Criteria for conformity for length and width

The dimension of at least 90 percent of the bags under test shall be in accordance with the requirement specified. Out of the remaining bags (10 percent, *Max*), dimension of not a single bag is below the specified nominal value by more than 2.0 cm and 1.0 cm in case of length and width, respectively.

Amendment No. 1 to IS 16186 : 2014

8.4.2 Criteria for Conformity for Ends/dm, Picks/dm, Number of Stitches/dm and Moisture Regain

The lot which meets the requirements of 8.4.1 and 8.4.1.1 shall be tested for ends/dm, picks/dm, number of stitches/dm and moisture regain as per the plan. A bag shall be termed as defective, if it fails to meet any one or more of these requirements. The lot shall be considered as conforming to the requirements of ends/dm, picks/dm, number of stitches/dm and moisture regain, if the total number of defective found in the sample is less than or equal to the corresponding acceptance number given in col 6 of Table 4.

8.4.3 Criteria for Conformity for Mass per Bag

The lot, which meets the above requirements, shall then be tested for mass of bag. The lot shall be declared as conforming to this requirement, if

- a) the average corrected value of mass per bag as obtained for sampled bags under test is not less than nominal value specified.
- b) the corrected mass of at least 80 percent of bags under test is in accordance with requirement specified.
- c) out of remaining bags (20 percent, *Max*), all bags may have corrected mass above the specified limit, but corrected mass of not more than 10 percent of sampled bags under test is below the specified value by more than 12 percent of specified nominal value.'

(Page 3, Table 4) — Substitute the following for the existing table:

Table 4 Sample Size and Acceptance Numbers
[Clauses 8.2, 8.3, 8.4.1, 8.4.1.1 and 8.4.2]

| Sl No. | No. of Bales in the Lot | No. of Bales in the Sample | For Number of Stitches/dm, Ends/dm, Picks/dm, Moisture Regain | | |
|--------|-------------------------|----------------------------|---|--------------------------------|-------------------|
| | | | No. of Bags from Each Bale | Total Number of Bags in Sample | Acceptance Number |
| (1) | (2) | (3) | (4) | (5) | (6) |
| i) | Up to 25 | 5 | 7 | 35 | 5 |
| ii) | 26 to 90 | 8 | 7 | 56 | 6 |
| iii) | 91 to 300 | 12 | 7 | 84 | 8 |
| iv) | 301 to 500 | 18 | 7 | 126 | 10 |

NOTE — If the number of bales in a consignment exceeds 500, the same shall be split into number of lots each comprising maximum of 500 bales. Joined bags shall also be drawn during sampling of bags for visual inspection and breaking strength test.

AMENDMENT NO. 2 JULY 2019
TO
IS 16186 : 2014 TEXTILES — LIGHT WEIGHT JUTE
SACKING BAGS FOR PACKING 50 KG FOODGRAINS —
SPECIFICATION

(Page 1, clause 4.1, Type B) — Substitute the following for the existing:

‘Type B — Double warp, single weft woven on conventional shuttle loom or modern shuttle less loom.’

(Page 3, clauses 7.2 and 7.2.1) — Substitute the following for the existing clauses:

‘7.2 BIS Certification Marking

The bales and jute bags may also be marked with the Standard Mark.

7.2.1 The product(s) conforming to the requirements of this standard may be certified as per the conformity assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the standard mark.’

AMENDMENT NO. 3 FEBRUARY 2024
TO
IS 16186 : 2014 TEXTILES — LIGHT WEIGHT JUTE SACKING BAGS FOR
PACKING 50 kg FOODGRAINS — SPECIFICATION

[Page 2, Table 2, Sl No. (v), col (2)] — Substitute ‘Number of joined bags per bundle of 25 bags, *Max*’ for ‘Number of joined bags per bundle of 25 bags.’

वस्त्रादि — 30 किग्रा तक खाद्यान्न
पैक करने के लिए पटसन के
बोरे — विशिष्टि

Textiles — Jute Bags for Packing up
to 30 kg Foodgrains — Specification

ICS 55.080; 59.060.10; 67.060

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FOREWORD

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

With the enactment of *The National Food Security Bill, 2013*, there has been an urgent need for packaging foodgrains in small pack sizes of 10, 15, 20, 25 and 30 kg.

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.

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Indian Standard

TEXTILES — JUTE BAGS FOR PACKING UP TO 30 kg FOODGRAINS — SPECIFICATION

1 SCOPE

This standard prescribes constructional details and other requirements of jute bags for packing up to 30 kg foodgrains.

2 REFERENCES

The following standards 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 the standards indicated below.

| <i>IS No.</i> | <i>Title</i> |
|---------------|---|
| 2873 : 1991 | Textiles — Packaging of jute products in bales — Specification (<i>second revision</i>) |
| 5476 : 1986 | Glossary of term relating to jute (<i>first revision</i>) |
| 9113 : 2012 | Textiles — Jute sacking — General requirements (<i>second revision</i>) |

3 TERMINOLOGY

For the purpose of this standard, the definitions given in IS 5476 shall apply.

4 MANUFACTURE

4.1 The bags shall be made from single piece of plain woven jute hessian of uniform construction having nominal mass of 267 g/m².

There shall be a single blue stripe, or stripes woven along the length of the bag or the bag shall be without stripe as agreed to between the buyer and the seller. The constructional particulars of sacking used in the fabrication of the bags shall be such that the bags meet the requirements specified in Table 1.

4.2 Seam

The side and bottom seams of bags shall be herackle stitched (L-type seam profile) along with hemming at the mouth of bags. The number of stitches per decimetre shall be 10 ± 1.

4.3 Safety Stitch

If agreed to between the buyer and the seller, a line of

safety union stitch shall be provided at the inner edges of the herackle stitches (*see* IS 9113). The number of safety union stitches per decimetre shall be 10 ± 1.

4.4 Hemming at the Mouth

Provisions of IS 9113 shall apply.

4.5 Freedom from Defects

The bags shall meet the requirement of freedom from major defects as given in Annex A.

5 SPECIFIC REQUIREMENTS

5.1 The bags shall conform to the requirements specified in Table 1.

5.2 The bales containing the bags shall also conform to the requirements specified in Table 2.

5.3 The contract moisture regain shall be 20 percent.

5.4 Additional Requirements for Labelling as Environment Friendly Products

5.4.1 General Requirement

5.4.1.1 The bags shall conform to the requirements for quality and performance prescribed under **5.1** to **5.3**.

5.4.1.2 The manufacturers shall produce to BIS, environmental consent clearance from the concerned State Pollution Control Board as per the provisions of *Water (Prevention and Control of Pollution) Act, 1974* and *Air (Preventions and Control of Pollution) Act, 1981* alongwith the authorization, if required under the *Environment (Products) Act, 1986* and the Rules made thereunder, while applying for ECO-Mark. Additionally, the manufacturer shall produce documentary evidence on compliance of the provisions related to noise level and occupational health under the provisions of *Factory Act, 1948* and Rules made thereunder.

5.4.1.3 The product packaging may display in brief the criteria based on which the product has been labelled environment friendly.

5.4.1.4 The material used for product packaging shall be reusable or made from recyclable or biodegradable materials.

5.4.1.5 Fatty alcohol based nonionics as emulsifier should be used, wherever required.

Table 1 Requirements of Jute Bags
(Clauses 4.1 and 5.1)

| Sl No. | Characteristic | Requirement | | | | | Tolerance | Method of Test, Ref to Clause of IS 9113 |
|--------|---|---|--------|--------|--------|--------|------------------------|--|
| | | Type 1 | Type 2 | Type 3 | Type 4 | Type 5 | | |
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| i) | Capacity, kg | 10 | 15 | 20 | 25 | 30 | — | — |
| ii) | Dimensions (<i>see Note</i>) : | | | | | | | 8.3.2 |
| | a) Outside length, cm | 56 | 64 | 71 | 74 | 81 | + 2 - 0 cm | |
| | b) Outside width, cm | 38 | 43 | 43 | 48 | 51 | + 2 - 0 cm | |
| ii) | Ends/dm | 43 | 43 | 43 | 43 | 43 | + 2 - 2 | 8.4.2 |
| iii) | Picks/dm | 39 | 39 | 39 | 39 | 39 | + 2 - 2 | 8.4.2 |
| iv) | Corrected mass/bag, g (<i>see Note</i>) | 137 | 173 | 190 | 219 | 252 | + 4.0 - 2.0 percent | 8.5.2 |
| v) | Average breaking strength of sacking (ravelled-strip method, 10 cm × 20 cm), <i>Min</i> , N(kgf) : | | | | | | | 8.6.2 |
| | a) Warpway | ← 1058 (108) with minimum individual value of 902(92) → | | | | | — | |
| | b) Weftway | ← 813 (83) with minimum individual value of 696 (71) → | | | | | — | |
| vi) | Average seam strength (5 cm × 20 cm ravelled strip), <i>Min</i> N (kgf) | | | | | | | 8.7 |
| | a) Side | ← 333 (34) with minimum individual value of 284 (29) → | | | | | — | |
| | b) Bottom | ← 304 (31) with minimum individual value of 255 (26) → | | | | | — | |
| vii) | Moisture regain, percent, <i>Max</i> | 17 | 17 | 17 | 17 | 17 | | 8.2 |
| viii) | Oil content on dry de-oiled material, <i>Max</i> | 3 | 3 | 3 | 3 | 3 | | 8.8 |

NOTES

1 The bags of specified dimensions are suitable for packing of wheat, rice and similar coarse grains. For packing of other materials, the buyer and the seller may agree to the dimensions other than those specified above. The mass of such bags may be calculated by the method given in 5.3 of IS 9113. However, tolerances specified in this table for dimension and on the mass shall be permissible.

2 Average moisture regain shall be maximum 22 percent. However, 10 percent of the individual value of moisture regain percent may be above 22 percent with an upper limit of 26 percent.

Table 2 Requirements of Packed Bales
(Clause 5.2)

| Sl No. | Characteristic | Requirement | Method of Test, Ref to Clause of IS 9113 |
|--------|---|--------------------------------|--|
| (1) | (2) | (3) | (4) |
| i) | Total number of bags per bale (<i>see Note 1</i>) | 500 | 8.9 |
| ii) | Number of bags per bundle | 25 | — |
| iii) | Contract mass of a bale, kg (<i>see Note 2</i>) | As calculated | — |
| iv) | Corrected net mass of a bale, kg | Not less than contract mass | 8.1 |
| v) | Number of joined bags per bundle of 25 bags | 1 | Visual |

NOTES

1 The number of bags per bale shall be 500 or as specified in an agreement between the buyer and the seller.

2 Contract mass of a bale is calculated as follows:

Contract mass of a bale = Nominal mass of bag × Specified number of bags per bale.

5.4.1.6 Polyhalogenated based phenolic fire retardants shall not be used.

5.4.2 Specific Requirements

5.4.2.1 The bags shall confirm to the requirements given in Table 3.

6 PACKING

The bags shall be packed in bales as prescribed in IS 2873 or as specified in the agreement between the buyer and the seller.

7 MARKING

7.1 The bales shall be marked as prescribed in IS 2873. Additional markings shall be made as stipulated by the buyer or required by regulation or law in force.

7.2 BIS Certification Marking

The bales may also be marked with the Standard Mark.

7.2.1 The use of the Standard Mark is governed by the provisions of the *Bureau of Indian Standards Act, 1986* and the Rules and Regulations made thereunder. The details of conditions under which the licence for the use of the Standard Mark may be granted to manufacturers or producers may be obtained from the Bureau of Indian Standards.

7.3 The bales may also be marked with ECO-Mark in addition to Standard Mark, if the requirements specified in **5.4** are also satisfied.

8 SAMPLING AND CRITERIA FOR CONFORMITY

8.1 Lot

All bales of jute bags of same size produced under similar conditions of production and delivered to a buyer against one dispatch note shall constitute a lot.

8.2 Sample Size and Criteria for Conformity

For assessing the conformity of lot to the requirements of this standard, bales shall be first selected from each lot at random in accordance with the col 2 and col 3 of Table 4. All the bales so selected in the sample shall be tested for a) Gross mass of bales, b) Tare mass of bailing hoops and other packing materials and c) Number of bundles per bale. Two bundles of bags selected at random from each bale selected in the sample shall be tested for total number of bags per bundle. The lot shall be considered as conforming to the requirements of this standard, if all the following conditions are satisfied:

- Total corrected net mass of all the bales in the sample is not less than the total mass of all the bales.
- Total number of bags in each bale selected as per **8.2** meet the relevant requirement.

8.3 Sample Size for Bags

For freedom from defects, length, width, ends/dm, picks/dm, number of stitch/dm, mass per bag and moisture regain, 16 bags shall be selected at random from each of the bales selected as per **8.2**. The total number of bags to be tested from each lot for these requirements is given in col 5 of Table 4.

8.4 Criteria for Conformity

8.4.1 Criteria for Conformity for Freedom from Defects

Each bag selected in the sample shall be tested for freedom from defects. A bag shall be termed as defective, if it contains two or more major defects (*see Annex A*). A lot shall be considered conforming to this requirement, if the number of defective is less than or equal to the acceptance number given in col 6 of Table 4. Acceptance number given in Table 4 is on

Table 3 Specific Requirements for ECO-Mark

(Clause 5.4.2.1)

| Sl No. (1) | Parameter ¹⁾ (2) | Maximum Limit, Hessians and Sackings mg/kg (ppm) (3) |
|---------------|---|--|
| i) | Non-halogenated hydrocarbons | 3 percent |
| ii) | a) Pesticides (Sum parameter) ²⁾ | 1.0 |
| | b) Banned Pesticides | Nil |
| | | (Below detectable limit) |
| iii) | pH of aqueous extract | 6.0 - 7.0 |
| iv) | Coupled aminess from azo-dyes (Sum parameters) ³⁾ | 50.0 |
| | | (Detectable limit using GC-MS) |

¹⁾ The methods of tests for ECO-parameters are being developed. Till the methods of tests are standardized, the manufacturer shall declare conformance taking into consideration the chemicals, auxiliaries and dyes used.

²⁾ The list of pesticides used on jute, banned restricted or withdrawn is appended as Annex B.

³⁾ The list of coupled amines released from azo-dyes is appended as Annex C.

the basis of an AQL of 4.0 percent.

8.4.2 Criteria for Conformity for Length, Width, Ends/dm, Picks/dm, Number of Stitches/dm and Moisture Regain

The lot which meets the requirements of 8.4.1 shall be tested for length, width, ends/dm, picks/dm, number of stitches/dm and moisture regain as per the plan. A bag shall be termed as defective, if it fails to meet any one or more of these requirements. The lot shall be considered as conforming to the requirements of ends/dm, picks/dm, stitches/dm and moisture regain, if the total number of defective found in the sample is less than or equal to the corresponding acceptance number given in col 6 of Table 4. The dimension of at least 90 percent of the bags under test should be in accordance with the requirement specified. Out of the remaining 10 percent bags, dimensions of not a single bag shall be below specified nominal value by more than 1.5 cm and 1.0 cm in case of length and width, respectively.

8.4.3 Criteria for Conformity for Mass per Bag

The lot which meets the above requirements, shall then be tested for mass of bag. The lot shall be declared as conforming to this requirement if,

- a) average value of mass per bag, as obtained for sampled bags is not less than the nominal value specified, and
- b) the corrected mass of at least 80 percent of the bags under test is in accordance with the requirements specified. Out of the remaining

bags, mass of not more than 10 percent of individual value of mass is below the specified value by more than 12 percent of the specified nominal value.

8.5 Sample Size and Criteria for Conformity for Breaking Strength Requirement

The lot, which meets the above requirements shall then be tested for breaking strength requirements. For this purpose, one bag shall be selected at random from each bale selected in the sample. Suitable test specimens shall be taken from these bags and tested for warpway, weftway and seam strength. The lot shall be declared as conforming to these requirements if,

- a) average values of warpway, weftway and seam breaking strengths respectively, as obtained for all test specimens are not less than the corresponding values specified, and
- b) none of the individual value is less than 25 percent below the specified value.

8.6 Sample Size and Criteria for Conformity for Oil Content

The lot, which meets the above requirements, shall then be tested for oil content. For this purpose two bags shall be selected out of two different bales selected as per 8.2. The lot shall be declared as conforming to this requirement, if both the bags meet the requirement of oil content.

8.7 The lot shall be considered as conforming to the requirements of this standard, if 8.2 and 8.4 to 8.6 are satisfied.

Table 4 Sample Size and Acceptance Numbers

(Clauses 8.2, 8.3, 8.4.1 and 8.4.2)

| Sl No. | No. of Bales in the Lot | No. of Bales in the Sample | For Length, Width, Number of Stitches/dm, Ends/dm, Picks/dm, Moisture Regain | | |
|--------|-------------------------|----------------------------|--|--------------------------------|-------------------|
| | | | No. of Bags from Each Bale | Total Number of Bags in Sample | Acceptance Number |
| (1) | (2) | (3) | (4) | (5) | (6) |
| i) | Up to 25 | 5 | 7 | 35 | 5 |
| ii) | 26 to 90 | 8 | 7 | 56 | 6 |
| iii) | 91 to 300 | 12 | 7 | 84 | 8 |
| iv) | 301 to 500 | 18 | 7 | 126 | 10 |

NOTE — If the number of bales in a consignment exceeds 500, the same shall be split into number of lots each comprising maximum of 500 bales. Joined bags shall also be drawn during sampling of bags for visual inspection and breaking strength test.

ANNEX A

(Clauses 4.5 and 8.4.1)

CLASSIFICATION OF DEFECTS

| Type of Defect | Description | Major | Minor |
|------------------------------------|---|--|-------|
| GAW | | > 1.5 cm | x |
| | | 0.5 cm to 1.5 cm | |
| Multiple broken/missing warp (end) | Two or more contiguous, regardless of length | x | |
| Multiple broken weft (pick) | Two or more contiguous, regardless of length | x | |
| | One pick, full width | | X |
| Cut, hole, tear or patch | Two or more warp or filling threads ruptured at adjoining points | x | |
| Float | A place in the fabric where warp and weft yarns escape the required interlacement | > 2 cm ² | x |
| | | 0.5 cm ² to 2 cm ² | |
| Gap stitching | Stitches missing | > 1.5 cm | x |
| | | 0.5 cm to 1.5 cm | |
| Corner gap | Corner of the bag not properly stitched resulting in formation of hole | > 1.5 cm | x |
| | | 0.5 cm to 1.5 cm | |
| Mildew | Staining of fabric due to fungal or bacterial growth visible to naked eye | x | |

NOTES

- 1 x – Major defects.
X – Minor defects.
- 2 Two minor defects shall be counted as one major defect.

ANNEX B

(Table 3)

LIST OF PESTICIDES USED ON JUTE – BANNED, RESTRICTED OR WITHDRAWN

B-1 PESTICIDES REGISTERED FOR USE ON JUTE IN INDIA

- a) Herbicides : Dalapon
b) Fungicides : Carbendazim
c) Insecticides : Carbaryl, Carbofuran, Endosulfan, Lindane, Phosalone, Quinalphos

B-2 EXTRACT FROM LIST OF PESTICIDES NOT APPROVED, RESTRICTED USE, WITHDRAWN OR BANNED IN THE COUNTRY AS ON 10.04.1992**B-2.1 Pesticides not Approved for Use**

2,4, 5-T

B-2.2 Pesticides Restricted for Use

Use of DDT in agriculture is banned. In very special circumstances warranting the use of DDT for plant protection, the State or Central Government may purchase it directly from M/s Hindustan Insecticides Ltd, to be used under expert Government supervision. Use of DDT for public health programme up to 10 000 MT per annum, except in case of any major outbreak, is restricted.

Use of Dieldrin shall be restricted for Locust Control in desert areas by Plant Protection Advisor to the Government of India.

B-2.3 Pesticides Banned/Withdrawn

Pentachlorophenol, Toxaphene and Aldrin.

ANNEX C

(Table 3)

LIST OF COUPLED AMINES RELEASED FROM AZO - DYES

| | | | |
|-------|-------------------------------|--------|--|
| i) | 4-Aminodiphenyl | xii) | 3,3' – Dimethylbenzidine |
| ii) | 2-Amino-4 -nitrotouene | xiii) | 3,3' – Dimethyl-4,4' diaminodiphenylmethane |
| iii) | Benzidine | xiv) | <i>p</i> -kresidin (2-Methoxy 5-methylaniline) |
| iv) | 4-Chloro- <i>o</i> -toluidine | xv) | 4,4' Methylene-bis-(2 -chloraniline) |
| v) | 2-Naphy Iamine | xvi) | 4,4' Oxydianiline |
| vi) | <i>o</i> -Alminoazotolune | xvii) | 4,4' Thiodianiline |
| vii) | <i>p</i> -Chloraniline | xviii) | <i>o</i> -Toluidine |
| viii) | 2,4-Diaminoanisole | xix) | 2,4, – Toluylenediamine |
| ix) | 4,4' – Diaminodiphenylmethane | xx) | 2,4,5 – Trimethylaniline |
| x) | 3,3' – Dimethoxybenzidine | xxi) | <i>p</i> -Amino-azobezene |
| xi) | 3,3' – Dimethoxybenzidine | xxii) | 2-Methoxyaniline |

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AMENDMENT NO. 1 DECEMBER 2022
TO
IS 16372 : 2015 TEXTILES — JUTE BAGS FOR PACKING UP TO 30 KG
FOODGRAINS — SPECIFICATION

(Page 1, Clause 5.3) — Substitute '16' for '20'.

(Page 2, Table 1) — Delete 'NOTE 2'.

(TXD 03)