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उत्पाद मैनुअल

Textiles — Sandwich Extrusion Laminated Polypropylene (PP)
Woven Sacks for Packaging Bulk Commodities — Specification
IS 18482: 2023 के अनुसार

PRODUCT MANUAL

FOR Textiles — Sandwich Extrusion Laminated Polypropylene (PP)
Woven Sacks for Packaging Bulk Commodities — Specification
ACCORDING TO IS 18482: 2023

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो(अनुरूपता मूल्यांकन) विनियम, 2018 की योजना -I के तहत प्रमाणन के संचालन में एकरूपता और पारदर्शिता के लिए इस उत्पाद मैनुअल का उपयोग सभी क्षेत्रीय / शाखा कार्यालयों और लाइसेंसधारियों द्वारा संदर्भ सामग्री के रूप में किया जाएगा। दस्तावेज़ का उपयोग बीआईएस प्रमाणन प्राप्त करने के इच्छुक संभावित आवेदकों द्वारा भी किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure uniformity of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification.

1.	मानक संख्या IS No.	:	IS 18482: 2023
	शीर्षक Title	:	Textiles — Sandwich Extrusion Laminated Polypropylene (PP) Woven Sacks for Packaging Bulk Commodities — Specification
	संशोधनों की संख्या No. of amendments	:	02
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	<i>The material should be conforming to clause 5.1, 5.2 & 5.4.5 of IS 18482: 2023.</i> Conformity of materials to the requirement of the specification may be established through either of the following or a combination of the same (No testing is required if the material is ISI marked): Test report from a laboratory recognized by the Bureau/ Government laboratories empanelled by the Bureau/NABL accredited laboratories; Material supplier's test certificate; In-house factory test report. Note: This section indicates the requirements for raw material (if specified in the IS) for which compliance is to be established during Grant of Licence/Change in Scope of Licence/Factory Surveillance
b)	समूहीकरण दिशानिर्देश Grouping Guidelines	:	<i>Please refer to Annex-A</i>

c)	नमूने का परिमाण Sample Quantity	:	30 Sacks Material intended to be filled in and mass of filling shall be declared in the test request. Note: This section indicates the quantity of the sample of the product and/or the raw material (if applicable), required to be sent to the laboratory for testing, for the purpose of Grant of Licence/Change in Scope of Licence/ Factory Surveillance (in case of market surveillance, effort may be made to procure the required quantity of product sample, as far as possible since raw material sample may not be available in market)
d)	Guidelines for sampling during surveillance		Only 1 sample to be tested for all requirements including UV resistance in an operative year. Rest of the samples are to be tested for requirements excluding UV resistance test.
d)	परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request	:	i. Type of bag based on filling capacity ii. Type of lamination iii. Optional requirements Note: Apart from the above, any other requirements/parameters may also be declared as per the standard, as applicable.
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer to Annex-B
4.	निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing	:	Please refer to Annex-C
5.	एक दिन में संभावित परीक्षण Possible tests in a day		Sack Dimensions, Warp and Weft, Fabric mesh, Fabric mass, Mass of Sack and Bale, Drop impact testing, Ash Content. Note: This section is for the guidance of BIS Certification Officers/Technical Auditors of BIS Authorized Outside Surveillance Agencies (OSAs) during factory inspection to provide ready reference regarding the tests which can be witnessed during the inspection in the factory by the officer/auditor.
6.	लाइसेंस का दायरा /Scope of the Licence:		
			"Licence is granted to use Standard Mark as per IS 18482: 2023 with the following scope:
	Name of the product		Sandwich Extrusion Laminated Polypropylene (PP) Woven Sacks
	Type of bag based on filling capacity		Type-I/Type-II/Type-III/Type-IV/Type-V/Type-VI/Type-VII
	Type of lamination		BOPP film extrusion lamination/ PP nonwoven fabric extrusion lamination
	Optional requirements		i. With/Without liner ii. With/Without UV stabilization

ANNEX-A

GROUPING GUIDELINES

1. Based on nominal filling capacity of sacks, there are 7 types defined in the ISS:

- i. *Type I* — Small size sacks having filling capacity of 5 kg;
- ii. *Type II* — Small size sacks having filling capacity of 10 kg;
- iii. *Type III* — Medium size sacks having filling capacity of 20 kg;
- iv. *Type IV* — Medium size sacks having filling capacity of 25 kg;
- v. *Type V* — Medium size sacks having filling capacity of 30 kg;
- vi. *Type VI* — Large size sacks having filling capacity of 40 kg; and
- vii. *Type VII* — Large size sacks having filling capacity of 50 kg.

2. Based on the type of sandwich extrusion laminations, 2 type of sacks have been defined:

- i. BOPP film laminated
- ii. PP nonwoven fabric laminated

3. Further, based on the requirement, sacks can be manufactured with or without liner and with or without UV stabilization.

Group 1	Group 2	Group 3
Type-I & Type-II	Type-III, Type-IV & Type-V	Type-VI & Type-VII

4. Considering the above, following grouping guidelines for GoL/ CSoL have been developed:

- i. Any one type of sacks from each Group shall be tested for all requirements, in order to cover the complete group.
- ii. Sacks with BOPP film lamination and PP nonwoven fabric lamination shall be tested separately in include in the scope of licence.
- iii. UV stabilized sacks and Non-UV stabilized sacks shall be tested separately to cover in the scope of licence.
- iv. If Sacks with liner are tested, Sacks without liner may also be incorporated in the scope of licence.
- v. Scope of licence shall be restricted based on the manufacturing and testing facilities available.
- vi. During operation of licence, samples of each variety covered in the scope of licence, shall be tested in rotation, to the extent possible

ANNEX – B

LIST OF TEST EQUIPMENTS
(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sl. No.	Tests Used In With Clause Reference		Test Equipment/Chemical
	Cl. No.	Test	
1	6.1.1	Sack Dimensions	Measuring scale or measuring tape.
2	6.1.2	Mass of Sack and Bale	Weighing Scales
3	6.2	Breaking strength of fabric	Constant-rate-of-extension (CRE) Tensile testing machine capable of constant rates of extension of 20 mm/min and 100 mm/min, with an accuracy of $\pm 10\%$, equipment for cutting samples
4	6.3	UV Resistance test	UV Resistance Apparatus comprising Fluorescent UV-lamps Type B (313 nm or its equivalent), Constant-rate-of-extension (CRE) Tensile testing machine
5	6.4	Drop impact testing	Drop Impact Tester as per Annexure E of IS 18482.
6	6.5	Ash Content	Weighing Balance (accurate to 0.001 g), Silica Crucibles, Bunsen Burner, Silica Triangle and Tripod, Muffle Furnace, capable of being controlled thermostatically at $590 \pm 10^\circ\text{C}$, Desiccator, Gloves and Crucible Holder
7	7	Conditioning (Various clauses)	Air Conditioner or Conditioning Chamber to condition samples at $27 \pm 2^\circ\text{C}$ and $65 \pm 2\%$, Hygrometer, Thermometer

ANNEX C

SCHEME OF INSPECTION AND TESTING

1. QUALITY ASSURANCE PLAN

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit (i.e. lot/batch etc.) and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with para 2.4.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers, the recommended definition of control unit is: All sacks having same construction, and produced under similar conditions of production in a day.

1.3.2 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.3 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in house as “R” or other tests which can be subcontracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) is also optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. PACKING AND MARKING - The Standard Mark as given in the Schedule of the licence shall be incorporated legibly and indelibly on each sack and bale cover provided always that the material so marked conforms to each requirement of the specification.

3.1 Packing and Marking shall be done as per the Indian Standard.

3.2 Additional Marking requirements: The material shall also be marked with the following additional requirement on each sack and bale cover:

a) “For BIS certification details please visit www.bis.gov.in”

4. REJECTION - All the production which conforms to the Indian Standard and covered under the scope of this licence shall be marked with the Standard Mark. Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 2016.

TABLE 1
(ONLY FOR GUIDANCE PURPOSE)

	(1)			(2)	(3)		
	Test Details			Test equipment requirement R: required (or) S: Subcontracting permitted	Levels of		Control
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
5.1	Raw materials	--	IS 10910	S	One	Each consignment	Conformity of materials to the requirement of the specification may be established through either of the following or a combination of the same (No testing is required if the material is ISI marked): Test report from a laboratory recognized by the Bureau/ Government laboratories empanelled by the Bureau/NABL accredited laboratories; Material supplier's test certificate; In house factory test report.
5.2	Fabrics						
5.2.1, 5.2.2, 5.2.3	PP Tapes	5.1	IS 6192	S	--		
5.2.2	Mesh size	5.2.2	IS 18482	R	Firm to have adequate in-process controls to check compliance of this parameter as per the tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
5.2.4	Unlaminated Fabric Mass	5.2.4	IS 18482	R			
5.3 and Table 1	Sandwich Extrusion Lamination	5.3.1	IS 18482	R			
5.4	Sack	5.4	IS 18482	R			
6.1.1 and	Dimensions	6.1.1	IS 18482	R	10	Firm to have adequate in-process controls to check compliance of this parameter as per the	

Table 1						tolerances given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.	
6.1.1 and Table 1	Warp and Weft	6.1.1	IS 18482	R	10		
6.1.1 and Table 1	Fabric mass	6.1	IS 18482	R	10		
6.1.2	Mass of sack and bale	6.1	IS	R	10		
6.2 and Table 1	Breaking strength of Fabric	6.2	IS 1969	R	5	Each Control Unit	
6.3	UV Resistance Test (If applicable)	6.3	IS 18482	S	One	Once in Three months	
6.4	Drop impact testing of filled sacks	6.4	IS 18482	R	2	Each Control Unit	
6.5 and Table 1	Ash Content	6.5	IS 18482	R	One	Each Control Unit	