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उत्पाद मैन्युअल

वस्त्रादि — 50 किग्रा खाद्यान पैक करने के लिए उच्च घनत्व पोलीइथाइलीन (एच.डी.पी.ई.)/ पोलीप्रोपाइलीन (पी.पी.) के बुने हुए बोरे— विशिष्टि IS 14887 : 2014 के अनुसार

Product Manual

for Textiles — High Density Polyethylene (HDPE)/ Polypropylene (PP) Woven Sacks for Packaging of 50 kg Food Grains According to IS 14887 : 2014

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 14887: 2014
	शीर्षक **Title**	:	Textiles — High Density Polyethylene (HDPE) / Polypropylene (PP) Woven Sacks for Packaging of 50 kg Food Grains
	संशोधनों की संख्या **No. of amendments**	:	04
2.	**नमूना दिशानिर्देश** **Sampling Guidelines**		
a)	**कच्चा माल** **Raw material**	:	The raw material shall be conforming to the requirements specified in clause 3.1, 3.2 & 3.3.1 of IS 14887: 2014. 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**	:	Sample of each type of material shall be drawn and tested to be included in the scope of licence.
c)	**नमूने का परिमाण Sample Quantity**	:	5 bags 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)	**परीक्षण अनुरोध में घोषित किए जाने वाले पैरामीटर Parameters to be Declared in Test Request**	:	Type of Material 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-A
4.	**निरीक्षण और परीक्षण की स्कीम Scheme of Inspection and Testing**	:	Please refer to Annex-B
5.	**एक दिन में संभावित परीक्षण Possible tests in a day**		
	All tests are possible to be carried out in a day except Breaking Strength & Elongation of fabric after exposure to UV radiation and weathering. 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 14887:2014 with the following scope:		
	उत्पाद का नाम Name of the product		High Density Polyethylene (HDPE) / Polypropylene (PP) Woven Sacks for packaging of 50 kg Food Grains
	Type of Material		High Density Polyethylene (HDPE)/Polypropylene (PP)

ANNEX-A

LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sr. No.	Tests used in with Clause Reference	Test Equipment
1.	Tapes – Width and Thickness, Clause 3.2	Steel Rule / Vernier0.1mm LC, Spring Loaded dial micrometer of 0.001mm LC & 140kN/m^2 pressure
2.	Tapes – Linear Density, Clause 3.2	Weighing Balance with 0.1mg accuracy, Drying Oven, Wrap Reel
3.	Tapes – Tenacity, Clause 3.2	Tensile testing machine with constant rate of extension, suitable clamps and facility to measure elongation
4.	Tapes – Elongation at point of rupture, Clause 3.2	Tensile testing machine with constant rate of extension, suitable clamps and facility to measure elongation
5.	Tapes – Heat Shrinkage (HDPE), Clause 3.2	Heat shrinkage test apparatus with water bath, specimen holder and lead in wire
6.	Tapes – Colour Fastness for pigmented tapes, Clause 3.2	Xenon Arc lamp test apparatus, Geometric grey scale
7.	Tapes – Dimensional stability (PP), Clause 3.2	Air circulating Oven
8.	Unlaminated Fabric Mass, Clause 3.2	Weighing Balance 5mg accuracy, Steel Scale, Flat smooth table
9.	Bottom seam, Clause 3.3.1	Steel Scale
10.	Mass of bale (Clause 4.1), Capacity (Clause 3.4, Table 1 & Sl. No. i)	Weighing Scale
11.	Dimensions, Clause. 4.2 and Table 1 ii)	Scale, Flat table
12.	Ends per dm, Clause 5.2 and Table 1 & Sl. No. iii)	Pick glass
13.	Picks per dm, Clause 5.2 and Table 1 & Sl. No. iv)	Pick glass
14.	Mass of sack, Clause 4.2 and Table 1 & Sl. No. v)	Weighing Balance, Steel scale, Flat smooth table
15.	Average breaking strength of fabric, Clause 4.2, Table 1 & Sl. No. vi)	Tensile testing machine CRE with facility to record/indicate force and separation
16.	Breaking strength of bottom seam, Clause 4.2, Table 1 & Sl. No. vii)	Tensile testing machine with suitable clamps, stop watch, scale

17.	Elongation at break of fabric, Cl. 4.2 and Table 1 viii)	Tensile testing machine CRE with facility to record/indicate force and separation
18.	Average breaking strength and elongation at break of UV stabilized HDPE/PP fabric after been exposed to UV radiation and weathering, Cl. 4.2 and Table 1 ix)	Tensile testing machine CRE with facility to record/indicate force and separation Test Chamber with Fluorescent UV- lamps Type B (313 nm or equivalent) with irradiance level 0.63W/m^2 with facility for heating and condensation
19.	Ash content, Cl. 4.2 and Table 1 x)	Weighing Balance 1mg accuracy, Silica crucible, Bunsen Burner, Silica Triangle and Tripod, Muffle furnace, Desiccator, Gloves, Crucible holder
20.	Conditioning of sample	Conditioning Chamber to maintain 27±2°C, 65±2% humidity

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 the HDPE/PP woven sacks manufactured in a day, using same raw material and under similar conditions of manufacturing.

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/empaneled 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 each bale of HDPE/PP Woven Sacks, 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 each bale of HDPE/PP Woven Sacks:

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: Sub- contracting permitted	**Recommended Levels of Control**		
Cl.	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
3.1	Raw Material	3.1	IS 14887	S	One	Each consignment	
3.2	Fabric	3.2	-do-	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		
3.3	Sack	3.3.1 & 3.3.2	-do-	R			
4.1	Mass of Bale	4.1	-do-	R			
4.2, Table 1 7 Sl. No. i)	i) Dimension	Annex B	-do-	R			
4.2, Table 1 7 Sl. No. ii)	a) Inside length b) Inside width	Annex B	-do-	R			
4.2, Table 1 7 Sl. No. iii)	Ends per dm	Annex B	-do-	R			
4.2, Table 1 7 Sl. No. iv)	Picks per dm	Annex B	-do-	R			
4.2, Table 1 7 Sl. No. v)	Mass of Sack	--	IS 1964	R			
4.2, Table 1 7 Sl. No. vi)	Average Breaking strength of fabric (Lengthwise and Widthwise)	--	IS 1969 (Part 1)	R	One	Each Control Unit	
4.2, Table 1 7 Sl. No. vii)	Minimum Breaking strength of bottom seam	--	IS 9030	R	One	Each Control Unit	
4.2, Table 1 7 Sl. No. viii)	Elongation at break of fabric (Lengthwise and Widthwise)	--	IS 1969 (Part 1)	R	One	Each Control Unit	
4.2, Table 1 7 Sl. No. xi)	Breaking Strength & Elongation of fabric after exposure to UV radiation and weathering	Annex C	IS 14887:2014	S	One	Once in three months	
4.2, Table 1 7 Sl. No. x)	Ash Content	Annex D	IS 14887:2014	R	One	Each Control Unit	