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उत्पाद मानुयल
TEXTILES —HIGH DENSITY POLY ETHYLENE (HDPE) /
POLYPROPYLENE (PP) WOVEN SACKS FOR FILLING
SAND

IS 14252:2015 के अनुसार

PRODUCT MANUAL For
TEXTILES —HIGH DENSITY POLY ETHYLENE (HDPE) /
POLYPROPYLENE (PP) WOVEN SACKS FOR FILLING
SAND
ACCORDING TO IS 14252:2015

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरण के प्रचलन में रीति और पारदर्शिता के सुसंगत सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेंस धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेंस/प्रमाण पत्र प्राप्त करने के इच्छुक भावी आवेदकों द्वारा भी इस दस्तावेज़ का उपयोग किया जा सकता है।

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2008 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	उत्पाद Product	:	IS 14252:2015
	शीर्षक Title	:	TEXTILES —HIGH DENSITY POLY ETHYLENE (HDPE) / POLYPROPYLENE (PP) WOVEN SACKS FOR FILLING SAND -SPECIFICATION
	संशोधन संख्या No. of amendments	:	03
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	The high density polyethylene (HDPE) or polypropylene (PP) used for manufacture of tape shall confirm to the requirements specified in IS 10146 or IS 10910,

		respectively. The raw material composition mix to be used for manufacturing of the HDPE/PP woven sacks shall be as agreed to between the buyer and the seller. The fabric used in the manufacture of HDPE/PP woven sacks shall conform to Cl. 3.2 of IS 14252:2015 3-strand hawser-laid polypropylene rope of 4 mm nominal diameter conforming to IS 5175 shall be used as tying cord, which shall also conform to the requirement of Cl 3.3 of IS 14252:2015 The material used for stitching shall be UV stabilized HDPE/PP tape as used in the fabric or any other UV stabilized thread/multifilament yarn suitable for the purpose.
b)	समूहिकरण दिशा निर्देश Grouping Guidelines	: NA – Separate samples of HDPE/PP woven sacks shall be tested
c)	नमूने का परिमाण Sample Size	: 30 bags with tying cords inserted in the mouth of each sack
3.	परीक्षण उपकरणों की सूची List of Test Equipment	: Please refer Annex –A
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	: Please refer Annex - B
5.	एक दिन में संभावित परीक्षण Possible tests in a day	: All tests as per IS 14252:2015 are possible to be carried out in a day except Average Breaking strength at break of UV stabilized HDPE/ PP fabric after been exposed to UV radiation and weathering as per Sl no. (viii) of Table 1 and Tensile test as it is recommended to condition the sample for 24 hours before testing as per IS 1969 (Part 1):2009.
6.	लाइसेन्स का कार्यक्षेत्र/Scope of the Licence:	
	IS 14252:2015 के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्र के लिए प्रदान किया जाता है Licence is granted to use Standard Mark as per IS 14252:2015 with the following scope:	
	Name of the product	WOVEN SACKS FOR FILLING SAND
	Made from (material)	High density polyethylene (HDPE) and/or polypropylene (PP)

ANNEX-A
LIST OF TEST EQUIPMENTS

Major test equipment required to test the requirements of the Indian Standard.

Sr. No.	Tests used in with Clause Reference	Test Equipment
1	Tapes – Width and Thickness (Cl. 3.2 and IS 6192/IS 11197)	Steel Rule / Vernier 0.1mm LC, Spring Loaded dial micrometer of 0.001mm LC & 140kN/m ² pressure
2	Tapes – Linear Density (Cl. 3.2 and IS 6192/IS 11197)	Weighing Balance 0.1mg accuracy, Drying Oven, Wrap Reel
3	Tapes – Tenacity (Cl. 3.2 and IS 6192/IS 11197)	Tensile testing machine with constant rate of extension, suitable clamps and facility to measure elongation
4	Tapes – Elongation at point of rupture (Cl. 3.2 and IS 6192/IS 11197)	Tensile testing machine with constant rate of extension, suitable clamps and facility to measure elongation
5	Tapes – Heat Shrinkage (HDPE) (Cl. 3.2 and IS 6192)	Heat shrinkage test apparatus with water bath, specimen holder and lead in wire
6	Tapes – Colour Fastness for pigmented tapes (Cl. 3.2 and IS 6192/IS 11197)	Xenon Arc lamp test apparatus, Geometric grey scale
7	Tapes – Dimensional stability (PP) (Cl. 3.2 and IS 11197)	Air circulating Oven
8	Unlaminated Fabric Mass (Cl. 3.2)	Weighing Balance 5mg accuracy, Steel Scale, Flat smooth table
9	Tying cord construction (3.3) and Seam Stitching (Cl. 3.4)	Steel Scale
10	Material used for stitching (If different from HDPE/PP Tape)- Breaking Load (Cl.4.4)	Tensile testing machine
14	Mass of bale (Cl. 4.2)	Weighing Scale
15	Dimensions [Cl. 4.1 and Table 1 i)]	Scale, Flat smooth table
16	Ends per dm [Cl. 4.1 and Table 1 ii)]	Pick glass
17	Picks per dm [Cl. 4.1 and Table 1 iii)]	Pick glass
18	Mass of sack, [Cl. 4.1 and Table 1 iv]	Weighing Balance,
19	Average breaking strength of fabric [Cl. 4.1 and Table 1 v)]	Tensile testing machine CRE with facility to record/indicate force and separation
20	Breaking strength of bottom seam [Cl. 4.1 and Table 1 vi)]	Tensile testing machine with suitable clamps, stop watch, scale
21	Elongation at break of fabric [Cl. 4.1 and Table 1 vii)]	Tensile testing machine CRE with facility to record/indicate force and separation

	Exposure to UV radiation (Cl. 5.6) Cl. 4.1 and Table 1 viii)]	Test Chamber with Fluorescent UV- lamps Type B with irradiance level 0.63W/m ² with facility for heating and condensation, Tensile testing machine CRE type
23	Ash content [Cl. 4.1 and Table 1 ix)]	Weighing Balance 1mg accuracy, Silica crucible, Bunsen Burner, Silica Triangle and Tripod, Muffle furnace, Desicator, Gloves, Crucible holder
25	Conditioning of sample (Cl. 6)	Conditioning Chamber to maintain 27±2°C, 65±2% humidity

The above list is indicative only and may not be treated as exhaustive

ANNEX – B

SCHEME OF INSPECTION AND TESTING

1. **LABORATORY** - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

- 1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. **TEST RECORDS** – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. **PACKING AND MARKING** – The Standard Mark as given in the Schedule of the license shall be printed using suitable inks by flexography or gravure printing or stenciling on each sack and bale of HDPE /PP woven sacks; as the case may be, provided always that sacks in each bale to which this mark is thus applied conforms to every requirement of the specification.

Note: The words “for HDPE woven sack only” or “ for PP woven sack only” as applicable shall be printed beneath the standard mark conspicuously on each sack.

- 3.1 Marking and packing shall be done as per the provisions of the Indian Standard. In addition, the following information shall be given on each bale or the label attached to it:

a) Control Unit (or Batch) Number.

b) BIS website details i.e.–“For details of BIS certification please visit www.bis.gov.in”

4. **CONTROL UNIT** – For the purpose of this scheme, All the HDPE/PP woven sacks of the same type having same construction produced under similar conditions in a day shall constitute a control unit.

5. **LEVELS OF CONTROL** - The tests as indicated in column 1 of Table 1 and the levels of control in column 3 of Table 1, shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

- 5.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.

5.2 SAMPLING FOR FLOOR INSPECTION:- Five sample bundles shall be selected every four hours of production, one Sack shall be taken from each selected sample bundle, subject to 30 Sacks in a control unit and shall be tested as under:

Sl. No.	Characteristics	Sample Size	Frequency	Total No. of Samples
1.	Dimensions	5 Sacks	Every 4 hours	30 Sacks
2.	Ends & Picks per dm	5 Sacks	Every 4 hours	30 Sacks
3.	Breaking strength of Fabric, Bottom	1 Sack	One sample when control	05 Sacks

	seam strength, and elongation		unit starts and then at equal Intervals of 2 hrs	
4.	Sack and Tying cord construction requirements	5 Sacks	Every 4 hours	30 Sacks
5.	Mass of the sack	5 Sacks	Every 4 hours	30 Sacks

Notes: 1Each bundle, which is an intermediate packaging, normally contains 50 sacks. However, the number of sacks in each bundle may vary as per the customer's requirement.

2. In case of any non-conformity, the production to be stopped. Root cause analysis to be carried out and corrective actions to be taken before resuming production

5.3 In the event of failure of the sample in one or more of the requirements, the entire material in the control unit may be either reprocessed for rectifying the defect or rejected. Such reprocessed material when tested again shall conform to all the requirements of the specification.

6. REJECTIONS—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
LEVELS OF CONTROL

(1)				(2)	(3)		(4)
TEST DETAILS					LEVELS OF CONTROL		Remarks
Cl. No.	Requirements	Test Method		Test equipment requirement R: required (or) S: Sub-contracting permitted	No.of Samples	Frequency	
		Clause	Reference				
3.1	Raw Material (HDPE/PP granules)	3.1	IS 14252	S	01	Each consignment	One sample from each consignment shall be tested for ascertaining conformity to IS 10146 or IS 10910, excluding over all migration, unless the same is accompanied by test certificate from supplier.
3.2	Fabric	3.2	-do-	R	05	Every 4 hours production (If tapes are manufactured in house)	Samples shall be drawn and tested at regular intervals to ascertain their conformity to the requirements of Cl. 3.2
					05	Each consignment (if tapes are procured from outside)	No testing is required if consignment is accompanied with test certificate of supplier indicating conformity to the specified requirements or is ISI marked.
3.3	Tying Cord (Material of Rope)	3.3	-do-	S	01	Each consignment	One sample from each consignment shall be tested for ascertaining conformity to IS 5175, unless the same is received with test certificate of the suppliers indicating its conformity to relevant specification or it is ISI marked

3.3	Tying Cord (Construction)	3.3	-do-	R	05	Every 4 hours of production	
3.4	Sacks	3.4	-do-	R	30 sacks	Each control unit	PI see 5.2 of SIT
3.4.1	Seam	3.4.1	-do-	R	30 sacks	-do-	-do-
3.4.1	Material used for Stitching	3.4.1	-do-	S	01	Each consignment	No testing may be required if consignment is accompanied by test certificate of supplier indicating conformity to CI 3.4
4.1	REQUIREMENTS (Table 1)						
(i)	Dimensions a) Outside length b) Outside width	Annex B	IS 14252	R	30 sacks	Each control unit	PI see 5.2 of SIT
(ii)	Ends per dm	Annex B	IS 14252	R	-do-	-do-	-do-
(iii)	Picks per dm	Annex B	IS 14252	R	-do-	-do-	-do-
(iv)	Mass of Sack (without weight of tying cord)	-	IS 1964	R	-do-	-do-	-do-
(v)	Average breaking strength of fabric a) Warpway b) Weftway	-	IS 1969 (Part 1)	R	-do-	-do-	-do-
(vi)	Average breaking strength of bottom seam	-	IS 9030	R	-do-	-do-	-do-
(vii)	Elongation at break of fabric a) Lengthwise b) Width wise	-	IS 1969 (Part 1)	R	5 sacks	Each control unit	

(viii)	Average breaking strength of fabric at break of UV Stabilized HDPE/PP Fabric after it has been exposed to UV radiation and weathering	Annex C	IS 14252	S	2 sacks	Once in three months	
(ix)	Ash Content	Annex D	-do-	R	2 sacks	Each control unit	
4.2	Mass of Bale	4.2	-do-	R	-	Each bale	

Note-1: Whether test equipment is required or sub-contracting is permitted in column 2 shall be decided by the Bureau and shall be mandatory. Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau

Note-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.