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उत्पाद मैनुअल

PRODUCT MANUAL FOR

**Textiles — High Density Polyethylene (HDPE) Polypropylene (PP) Woven Sacks
for Packaging of 25 kg Polymer Materials — Specification
IS 16703: 2017 के अनुसार**

PRODUCT MANUAL FOR

**Textiles — High Density Polyethylene (HDPE) Polypropylene (PP) Woven Sacks
for Packaging of 25 kg Polymer Materials — Specification
According to IS 16703: 2017**

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 16703: 2017
	शीर्षक Title	:	Textiles — High Density Polyethylene (HDPE)/ Polypropylene (PP) Woven Sacks for Packaging of 25 kg Polymer Materials — Specification
	संशोधनों की संख्या No. of amendments	:	03
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	The raw material shall be conforming to the requirements specified in Clause 4.1, 4.2, 4.3, 4.4 & 4.5 (as applicable) of IS 11652: 2017. Conformity of materials to the above 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	:	Please refer ANNEX – A
c)	नमूने का परिमाण Sample Quantity	:	10 sacks + approx 15m X 6 reels HDPE/PP tape + approx 20 m stitching thread + approx 1m X 1m un-laminated fabric + approx 1 m X 1m laminated fabric + approx 1 m X 1m liner 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	:	i) Material ii) Type 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		Please refer Annex – D 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 16703: 2017 with the following scope:

	Name of the product	High Density Polyethylene (HDPE) Polypropylene (PP)WOVEN SACKS FOR PACKAGING OF 25 kg POLYMER MATERIALS
	Material	High Density Polyethylene (HDPE)/Polypropylene (PP)
	Type	Gusseted/Non-Gusseted
	Optional Requirements	With/without Lamination with/without Liner with/without UV Stabilization

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ANNEX A

GROUPING GUIDELINES

- 1. Based on Material of manufacturing, there are 2 type of Woven Sacks for Packaging of 25 kg Polymer Materials specified in the standard:**
 - i. High Density Polyethylene (HDPE)
 - ii. Polypropylene (PP)
- 2. Further, Woven Sacks for Packaging of 25 kg Polymer Materials could be of 2 Types:**
 - i. Gusseted
 - ii. Non-Gusseted
- 3. In addition to above, sacks may also be manufactured with Lamination, Liner and UV resistance property, if required.**
- 4. Considering the above, following grouping guidelines for GoL/ CSoL have been developed:**
 - i. Sacks manufactured from each Material (High Density Polyethylene (HDPE)/Polypropylene (PP)) shall be tested separately to cover in the scope of licence.
 - ii. If gusseted sacks are tested, Non-gusseted sacks may also be incorporated in the scope of licence.
 - iii. If sacks with lamination are tested, sacks without lamination may also be incorporated 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. If UV stabilized sacks are tested, sacks without UV stabilization may also be incorporated in the scope of licence.
 - vi. Scope of licence shall be restricted based on the manufacturing and testing facilities available.
 - vii. 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)

Sr. No.	Tests used in with Clause Reference	Test Equipment/Chemical
1	Dimensions, Clause 4.2 & Table 1	Flat smooth table Steel Scale
2	Ends per dm & Picks per dm, Clause 4.2 & Table 1	Pick glass
3	Mass of sack and Bale, Clause 5.1 & Table 1	Weighing Balance
4	Capacity, Clause 4.6	Weighing Scale, Filling Material
5	Average breaking strength of fabric, Clause 5.2 and Table 1	Tensile testing machine CRE with facility to record/indicate force and separation
6	Breaking strength of bottom seam, Clause 5.2 and Table 1	Tensile testing machine with suitable clamps, stop watch, scale
7	Elongation at break of fabric, Clause 5.2 and Table 1	Tensile testing machine CRE with facility to record/indicate force and separation
8	Drop impact strength, Clause 5.3 and Table 1	Drop Impact test apparatus, filling material
9	Ash content, Clause 5.4 and Table 1	Weighing Balance 1mg accuracy, Silica crucible, Bunsen Burner, Silica Triangle and Tripod, Muffle furnace, Desicator, Gloves, Crucible holder
10	UV resistance, Clause 5.5	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
11	Conditioning of sample (Cl. 7)	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 woven sacks of particular variety manufactured from same material under similar conditions 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/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 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 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: Subcontracting permitted	Levels of Control		
Clause	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
4.1	Raw Material	--	IS 10146 / IS 10910	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.
4.2	Fabric		IS 6192	S	01	Each consignment	
4.3	Sacks	4.3	IS 16703	R	Firm to have adequate in-process controls to check compliance of this parameter as per the requirements given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
4.3.1	Bottom Seam	4.3.1	-do-	R			
4.3.1	Material used for Stitching	4.3.1	-do-	S	01	Each consignment	

4.4	Lamination (if applicable)	4.4	IS 16703	R	Firm to have adequate in-process controls to check compliance of this parameter as per the requirements given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
4.5	Liner (if applicable)	4.5	-do-	R			
4.6	Capacity	4.6	-do-	R			
5.1	Mass of Bale	--	-do-	R			
5.2 and Table 1	Requirements of HDPE/PP Woven Sacks for Packaging Polymer Materials						
5.2 and Table 1 i)	Dimensions	Annex B	IS16703	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 and Table 1 ii)	Ends per dm	Annex B	IS 16703	R			
5.2 and Table 1 iii)	Picks per dm	Annex B	IS 16703	R			
5.2 and Table 1 iv)	Mass of sack	--	IS 1964	R			
5.2 and Table 1 v)	Average breaking strength of fabric	--	IS 1969 (Part 1)	R	01	Each control unit	
5.2 and Table 1 vi)	Breaking strength of bottom seam	--	IS 9030	R	01	Each control unit	
5.2 and Table	Elongation at break of fabric	--	IS 1969 (Part 1)	R	01	Each control unit	

1 vii)							
5.2 and Table 1 viii)	Drop impact strength	Annex C	IS 16703	R	01	Each control unit	
5.2 and Table 1 ix)	Ash content	Annex D	IS 16703	R	01	Each control unit	
5.5	UV resistance	Annex F	IS 16703	S	01	Once in 3 months	