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उत्पाद मानुयल
Textiles - HDPE / PP Woven Sacks for Packaging of Fertilizers
IS 9755:2021 के अनुसार

PRODUCT MANUAL FOR
Textiles - HDPE / PP Woven Sacks for Packaging of Fertilizers
According to IS 9755:2021

विभिन्न उत्पादों के लिए भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन) विनियम, 2018 की योजना- I के तहत प्रमाणन के संचालन में अभ्यास और पारदर्शिता के संचालन में पारदर्शिता सुनिश्चित करने 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 लाइसेंस/प्रमाणपत्र 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 coherence 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 licence/certificate.

1.	उत्पाद Product	:	IS 9755:2021
	शीर्षक Title	:	Textiles — High Density Polyethylene (HDPE)/ Polypropylene(PP) Woven Sacks for Packaging Fertilizers— Specification
	संशोधनों की संख्या No. of amendments	:	01
2.	कच्चा माल Raw material		
a)	कच्चा माल Raw material	:	HDPE/ PP used for manufacture of tape shall conform to IS 10146 / IS 10910 respectively. The liner if used shall be LDPE/LLDPE/HMHDPE/HDPE. Test certificate from raw material manufacturer shall be obtained for each lot of HDPE/PP/Liner received indicating conformity to relevant requirements of the IS. If the firm is directly purchasing HDPE/PP Fabric Tapes, they shall confirm to Clause 3.2 of IS 9755, and IS 6192 / IS 11197 respectively.
b)	समूलीकरण लक्ष्य लक्ष्य Grouping Guidelines	:	PI See Annex A

c)	नमूने का पररमाण Sample Size	:	1kg HDPE/ PP Granules, 1metre X 1metre Unlaminated & Laminated Fabric, Stitching thread for UV stabilized sacks, 10 to12 woven sacks. Equal number of liners may be drawn if the sack is provided withliner.
3.	परीक्षण उपकरण की सूची List of Test Equipment	:	Please refer Annex - B
4.	लनरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	Please refer Annex-C
5.	एक ल द नमेंं सभालवत परीक्षण Possible tests in a day	:	Please refer Annex-D
6.	लाइसेंस का कायक्षेत्र Scope of the Licence :		
	IS 9755:2021 के अनुसार मानक मुहर का उपयोग करने के वलए लाइसेंस व नमनवलख स्त कायक्षेत्रेवलए प्रदान वकया जाता है Licence is granted to use Standard Mark as per IS 9755:2021 with the following scope:		
	उत्पाद का नाम Name of the product	High Density Polyethylene (HDPE) Polypropylene (PP) WovenSacks For Packing Fertilizers.	
	Material	High Density Polyethylene (HDPE) / Polypropylene (PP)	
	Type	Type I /Type II	
	Other Aspects	With / without Lamination, with / without Liner, with / without UVStabilization, Pigmented/Non Pigmented sacks or sacks manufactured with Pigmented /Non Pigmented Tapes.	

Annex A

Grouping Guidelines

Separate sample shall be tested for Type I and Type II Sacks as well as HDPE sacks and PP sacks. If raw material i.e, coloured tapes are tested along with the white/natural coloured tapes, pigmented/coloured sacks may also be covered in the scope. If sacks with lamination / Liner / UV Stabilization are tested, sacks without lamination / Liner / UV Stabilization respectively may also be covered in the scope.

However, it shall be ensured that the manufacturer has got complete manufacturing as well as testing facilities for the sizes required to be covered in the scope of the licence.

During the operation of licences, samples of all varieties covered in the licence shall be drawn for testing in rotation

Annex – B**List of Test Equipment*****Major test equipment required to test as per requirements of Indian Standard.***

Sr. No.	Tests used in with Clause Reference	Test Equipment
1	Width & Thickness of Tape(3.2 and 5.3 of IS 6193)	Steel Rule / Vernier 0.1mm LC, Spring Loaded dialmicrometer of 0.001mm LC & 140kN/m ² pressure
2	Linear Density(3.2 and 5.1 of IS 6193)	Wrap reel, Weighing Balance with least count 0.1mg, Drying Woven.
3	Tenacity(3.2 and 5.4 of IS 6193)	Tensile testing machine with constant rate of extension, suitable clamps and facility to measure elongation.
4	Tapes – Elongation at point of rupture (Cl.4.2 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. 4.2 and IS 6192)	Heat shrinkage test apparatus with water bath, specimen holder and lead in wire 6 T
6	Tapes – Colour Fastness for pigmented tapes (Cl. 4.2 and IS 6192/IS 11197)	Xenon Arc lamp test apparatus, Geometric grey scale.
7	Tapes – Dimensional stability (PP) (Cl. 4.2 and IS 11197)	Air circulating Oven
8	Liner Thickness, Clause 4.4	Dead weight dial micrometer with flat anvil 6mm and spindle head flat surface dia 4.8mm, Spring dial micrometer
9	Length & Width of Liner, Clause 4.4	Steel scale, Tape
10	Bottom seal of loose liner, Clause 4.4	Steel scale, Tape
11	Lamination coating mass, Lamination overhang(	Weighing Balance, Steel scale, Flat smooth table
12	Bottom seam stitches(Cl 4.6)	Steel Scale
13	U.V Resistance(Cl 5.7)	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
14	Mass of sack - Table 1 S No (v)	Weighing scale
15	Dimensions Length & Width Cl. 3.3.1 & 4.1 Sl.No i of Table 1	Steel scale, Flat smooth table
16	Ends & Picks Sl.No ii & iii of Table 1	Pick Glass
17	Mass of Fabric Sl.No iv of Table 1	Weighing Balance, Steel scale
18	Average Breaking Strength of Fabric (Ravelle Method) a.Length wise b.Width wise, c.Width wise lamination joint Cl 5.1 and Table 1 S No (vii)	Tensile testing machine CRE with facility to record/indicate force and separation
19	Breaking strength of bottom seam Cl. 3.3.1 & 4.1 and Table 1 S No (vii)	Tensile testing machine with suitable clamps, stop watch, scale
20	Elongation at break of fabric Cl. 3.3.1 & 4.1 and Table 1 S No (viii)	Tensile testing machine CRE with facility to record/indicate force and separation
21	Ash Content Cl. 3.3.1 & 4.1 and Table 1 S No (ix)	Weighing Balance, Bunsen burner, Silica triangle & Tripod, Muffle furnace, Dessicator, Gloves, Crucible holder, Ventilated hood.
22	Conditioning of sample (Cl. 7)	Conditioning Chamber to maintain 27±2°C, 65±2% humidity
23	Drop Impact Test Cl 5. 6 and Table 1 S No (x)	Drop Impact test apparatus as per Annex D

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

Annex – C**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.

The manufacturer shall prepare a calibration plan for the test equipments.

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

3. PACKAGING AND MARKING – The Standard Mark as given in Schedule of the license and Licence Number (i.e. CM/L.....) shall be printed legibly and indelibly on each sack and marking on sacks and bales shall be done as per requirements of Cl. 5.1, 5.2, 5.3 of IS 9755:2021, provided always that sacks thus marked conforms to all the requirement of the specification.

3.1 In addition, BIS Licence Number CM/L- ..., and details of BIS website shall be marked on sacks and bales as follows: —For details of BIS certification please visit www.bis.gov.in

3.2 **FOR SACK ONLY:** shall be marked on top of the standard mark printed on each sack.

4. CONTROL UNIT – All the HDPE/PP woven sacks of the 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 Standards and covered by the license should be marked with Standard Mark.

6. STORAGE - Finished sacks or bales shall be stored as prescribed in the Indian Standard.

7. 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. Any rejected material which is potentially resalable shall be deformed in such a manner that it cannot be used for any other purpose. A separate record shall be maintained giving information relating to all such rejections/defective/substandard material of the production not conforming to the requirements of the Specification and the method of its disposal. Such material shall in no case be stored together with that conforming to the Specification. The Standard Mark (if already applied) on rejected material should be defaced.

TABLE 1
LEVELS OF CONTROL
(Clause 5 of SCHEME OF INSPECTION AND TESTING)

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Clause	Requirement	Test Methods			No. of Sample	Frequency	Remarks
		Clause	Reference				
4.1	Raw Material (HDPE/PP granules)		IS 10146 / IS 10910	S	1	Each consignment(See note 3)	No testing is required if material is accompanied bysupplier's test certificate indicating conformity or ISI marked
4.2	Fabric (HDPE/PP tapes)	4.2	IS 9755:2021	S	05	Each control unit(if manufactured in house) Each consignment (ifprocured from outside) (See note 3)	-do-
4.4	Liner	4.4	IS 9755	S	01	Each consignment(See note 3)	-do-
4.5	Lamination	4.5	IS 9755	R	05	Each controlunit	To be done if required by buyer
4.6	Bottom seam	4.6	IS 9755	R	30	Each controlunit	

4.7	Mouth of Sack	3.7	IS 9755	R	30	Each controlunit	
3	Capacity	3	IS 9755	R	30	Each controlunit	
5.2	Visual Inspection	5.2	IS 9755	R	-	Adequate visual inspection	
5.3	Mass of Bale	5.3	IS 9755	R	30	Eac h contr ol unit	
5.7	U.V Resistance	Annex F	IS 9755	S	01	Once in 03 months	
5.1, Table 1	Requirements for sacks						
i)	Dimensions	Annex B	IS9755	R	30	Each controlunit	
ii)	Ends per dm	Annex B	IS9755	R	30	Each controlunit	
iii)	Picks per dm	Annex B	IS9755	R	30	Each controlunit	
iv)	Mass of fabric	Annex B	IS 9755	R	30	Each controlunit	
v)	Mass of Sack		IS 1964	R	30	Each control unit	
vi)	Average breaking strength of fabric		IS 1969 (Part 1)	R	05	Each controlunit	
vii)	Breaking strength of bottom seam		IS 9030	R	05	Each controlunit	

viii)	Elongation at break of fabric		IS 1969 (Part 1)	R	05	Each controlunit	
ix)	Ash content	Anne xC	IS 9755	R	01	Each controlunit	
x)	Drop Impact strength test	Annex D	IS 9755	R	01	Each control unit	

Note-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled 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.

Note 3: One consignment of material is defined as all material of one defined type and quality, delivered to the manufacturer by one supplier according to one dispatch note

Annex D

Possible tests in a day

When appropriately conditioned samples are available, the following tests can be carried out in a day:

- (i) Linear density of tape
- (ii) Tenacity of tape
- (iii) Elongation of tape
- (iv) Thickness of tape
- (v) Width of tape
- (vi) Tests for Bottom Seam
- (vii) Lamination Mass
- (viii) Lamination Overhang
- (ix) Liner Thickness
- (x) Dimensions
- (xi) Ends per dm
- (xii) Picks per dm
- (xiii) Mass of Fabric
- (xiv) Breaking strength of bottom seam
- (xv) Drop Impact strength test