



**PRODUCT MANUAL**  
**FOR TEXTILES — HIGH DENSITY POLYETHYLENE (HDPE)/POLYPROPYLENE (PP) WOVEN SACKS**  
**FOR PACKAGING 10 KG, 15 KG, 20 KG, 25 KG AND 30 KG FOODGRAINS — SPECIFICATION**  
**ACCORDING TO IS 16208:2015**

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.	<b>Product</b>	:	IS 16208:2015
	<b>Title</b>	:	Textiles — High Density Polyethylene (HDPE)/Polypropylene (PP) Woven Sacks for Packaging 10 kg, 15 kg, 20 kg, 25 kg and 30 kg Foodgrains — Specification
	<b>No. of Amendments</b>	:	02
2.	<b>Sampling Guidelines:</b>		
a)	Raw material	:	The high density polyethylene (HDPE) or polypropylene (PP) used for manufacture of tape shall conform to the requirements specified in IS 10146 or IS 10910 respectively.  The fabric used in the manufacture of HDPE/PP woven sacks shall conform to Cl 4.2 of IS 16208:2015
b)	Grouping guidelines	:	Please refer Annex –A
c)	Sample Size	:	5 bags
3.	<b>List of Test Equipment</b>	:	Please refer Annex –B
4.	<b>Scheme of Inspection and Testing</b>	:	Please refer Annex - C
5.	<b>Possible tests in a day :</b>	:	Dimensions, Ends and Picks, Mass, average breaking strength of fabric, breaking strength of bottom seam, elongation at break, ash content
6.	<b>Scope of the Licence :</b>		
	Licence is granted to use Standard Mark as per IS 16208:2015 with the following scope:		

	Name of the product	Textiles — High Density Polyethylene (HDPE)/Polypropylene (PP) Woven Sacks for Packaging 10 kg, 15 kg, 20 kg, 25 kg and 30 kg Foodgrains — Specification
	Type	Type I/II/III/IV/V
	Material	HDPE/PP

**ANNEX-A**  
**PRODUCT MANUAL**  
**FOR TEXTILES — HIGH DENSITY POLYETHYLENE (HDPE)/POLYPROPYLENE (PP) WOVEN SACKS**  
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- (i) There shall be two group for woven sacks based on material requirements of HDPE or PP as under:

Group 1: HDPE woven sacks

Group 2: PP woven sacks

ii) For considering GOL/Addition in Scope of licence, one sample of any type (I/II/III/IV/V) from each group may be drawn for independent testing and GOL/Addition in Scope of licence may be considered for all types subject to the manufacturing and testing capability of the manufacturers for that particular group.

iii) During the operation of the licence, samples of each variety covered in the licence shall be tested by rotation

**ANNEX-B**  
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**LIST OF TEST EQUIPMENTS**  
**Major test equipment required to test as per the Indian Standard**

SL. NO.	Requirement with Clause reference	Test Equipment
1.	Capacity (Cl 4.4), Mass of Bale (Cl 5.1)	Weighing Scales
2.	Dimensions and Ends and Picks (Cl 5.2)	Vernier caliper, scale or measuring tape, 5 cm gauge
3.	Average breaking strength of fabric and minimum breaking strength of bottom seam, Elongation at break (Cl 5.2)	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.	Breaking strength of Fabric after exposure to UV Radiation (Cl 5.2)	UV Resistance Apparatus comprising Fluorescent UV-lamps Type B (313 nm or its equivalent).
5.	Ash Content (Cl 5.2)	Weighing Balance, accurate to 0.001 g, Silica Crucibles, Bunsen Burner, Silica Triangle and Tripod, Muffle Furnace, capable of being controlled thermostatically at $550 \pm 10^\circ\text{C}$ , Dessicator, Gloves and Crucible Holder
6.	Conditioning (Various clauses)	Air Conditioner or Conditioning Chamber to condition samples at $27 \pm 2^\circ\text{C}$ and $65 \pm 2\%$ , Hygrometer, Thermometer

**The list above is indicative and may not be taken as exhaustive**

ANNEX – C

**SCHEME OF INSPECTION AND TESTING  
FOR TEXTILES — HIGH DENSITY POLYETHYLENE (HDPE)/POLYPROPYLENE (PP) WOVEN SACKS  
FOR PACKAGING 10 KG, 15 KG, 20 KG, 25 KG AND 30 KG FOODGRAINS — SPECIFICATION  
ACCORDING TO IS 16208:2015**

**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. PACKAGING AND MARKING**–The Standard Mark as given in the schedule of the licence shall be stenciled on each sack and each bale of HDPE/PP Woven Sacks, provided always that the sacks and the bales to which this mark is thus applied conforms to every requirement of the specification.

**3.1** Printing, Packaging and Marking on the sacks and bales shall be done as per the provisions of the Indian Standard. In addition, BIS Licence Number CM/L-..., and details of BIS website shall be marked on each sack and bale as follows: “For details of BIS certification please visit [www.bis.gov.in](http://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** – For the purpose of this scheme, all the sacks of the same type having the same construction manufactured in a day or part thereof from the same material (HDPE or PP) shall constitute a control unit.

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

S.No.	Characteristics	Sample Size	Frequency	Total No. of Samples
1	Dimensions	5 bags	Every 4 hours	30 bags
2	Ends & Picks per dm	-do-	-do-	-do-
3	Breaking strength of Fabric, Bottom seam strength, and elongation	1 bag	One sample when control unit starts and then at equal intervals of 2 hours	
4	Sack	5 bags	Every 4 hours	30 bags
5	Mass of the sack	-do-	-do-	-do-

**Note- Each 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**

- 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.
- 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  
(Scheme of Inspection and Testing)**

<b>(1)</b>				<b>(2)</b>	<b>(3)</b>		
<b>Test Details</b>				<b>Test equipment requirement</b> R: required (or)S: Sub-contracting permitted	<b>Recommended Levels of Control</b>		
Cl.	Requirement	Test Methods Clause Reference			No. of Sample	Frequency	Remarks
4.1, 4.2	Raw material	4.1, 4.2	IS 16208	S	One	Each consignment	See Note 3
4.2	Fabric/Tape	4.2	IS 16208	R	05	Every 4 hours	Samples shall be drawn and tested at production regular intervals to ascertain their conformity to requirements of Cl.4.2
4.3	Sacks	4.3	4.3, 4.3.1, 4.3.2	R	30	Each Control Unit	See 4.1 of SIT
5.1	Mass of Bale	4.1	IS 16208	R	Each Bale		
5.2 & Table 1	i) Dimension	Annex B	-do-	R	30	Each Control Unit	
	a) Inside length	Annex B	-do-	R	-do-	-do-	See 4.1 of SIT
	b) Inside width	Annex B	-do-	R	-do-	-do-	-do-
	ii) Ends per dm	Annex B	-do-	R	-do-	-do-	-do-
	iii) Picks per dm	Annex B	-do-	R	-do-	-do-	-do-
	iv) Mass of Sack		IS 1964	R	-do-	-do-	-do-

	v) Average Breaking strength of fabric (Lengthwise and Widthwise)		IS 1969 (Part 1)	R	5 bags	-do-	-do-
	vi) Minimum Breaking strength of bottom seam		IS 9030	R	-do-	-do-	-do-
	vii) Elongation at break of fabric (Lengthwise and Widthwise)		IS 1969 (Part 1)	R	-do-	-do-	-do-
	viii) Breaking Strength of fabric after exposure to UV radiation and weathering	Annex C	IS16208	S	2 bags	Once in three months	
	ix) Ash Content	Annex D	IS16208	R	2 bags	Each Control Unit	

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 to BO head.

Note-3: 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):

- i. Test report from a laboratory recognized by the Bureau or Government laboratories empaneled by the Bureau
- ii. Material manufacturer's test certificate
- iii. In house factory test report