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उत्पाद मैनुअल

Specification for Expanded Vinyl Coated
Fabrics

IS 8698: 2022 के अनुसार

PRODUCT MANUAL
FOR Specification for Expanded Vinyl Coated
Fabrics
ACCORDING TO IS 8698: 2022

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 8698:2022
	शीर्षक Title	:	Specification for Expanded Vinyl Coated Fabrics
	संशोधनों की संख्या No. of amendments	:	0
2.	नमूना दिशानिर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	Base fabric shall be conforming to the requirement specified in Clause 7.2 of IS 8698: 2022 Conformity of materials to the requirement of the specification may be established through either of the following or a combination of the same: 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 variety shall be tested to cover in the scope of licence. Further, if Sample with any surface finish(Embossed/Printed/Other surface treated(to be

			declared)) is tested, Plain Expanded Vinyl Coated Fabrics may also be included in the scope of licence.
c)	नमूने का परिमाण Sample Quantity	:	3 x 1Metre and Reference sample (for color comparison) 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 Grade Class Surface Finish 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		
	Appearance, Description, Color, grain and finish, Coating, Gelling Test, Thickness of coated fabric, Resistance to cold, Blocking Resistance, Resistance to penetration of water, Elongation & Elastic recovery for a constant load, provided the conditioned samples are available (where applicable). 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 8698: 2022 with the following scope:		
	Name of the product	Specification For Expanded Vinyl Coated Fabrics	
	Type	Type A/Type B	
	Grade	Grade 1/Grade 2/Grade 3	
	Class	Class A/Class B/Class C	
	Surface Finish	Plain/Embossed/Printed/Other surface treated(to be declared)	

ANNEX-A

LIST OF TEST EQUIPMENTS

(INDICATIVE LIST, FOR GUIDANCE ONLY)

Sr No	Tests used in with Clause Reference	Test Equipment/Chemical
1.	Thickness of coated fabric, Clause 6.2	➤ Thickness gauge
2.	Appearance, Clause 7.3	➤ Flat illuminated surface
3.	Colour, grain and finish, Clause 7.4	➤ Reference sample ➤ Daylight
4.	Resistance to Heat and Loss of Mass on Heating, Clause 7.6	➤ Circulating Air oven as described in Clause C-2.1 of IS 8698.
5.	Resistance to cold, Clause 7.7	➤ Cooling Chamber ➤ Steel pin having 6mm diameter ➤ Stop watch
6.	Color fastness to dry and wet rubbing, Clause 7.8	➤ Test apparatus as per figure 1 of Annex D of IS 8698 consisting of abrading member as per figure 2 & Appendix C of IS 1259:1984 ➤ Bleached white cotton fabric as per variety No. 1 of IS-77 ➤ Cotton wool ➤ Glass plate ➤ Dead Weight (500g) ➤ Soap solution as per Type 1 of IS 285 ➤ Sodium carbonate conforming to IS 296 ➤ Normal water ➤ Grey Scale
7.	Color fastness to daylight, Clause 7.9	➤ Grey Scale ➤ Aluminum Foil ➤ cold water ➤ Soap Solution (conforming to Type 1 of IS 285) ➤ Wooden box as per Annex D of IS 8698 fitted with wire mesh of 0.315 mm thickness For Colour Fastness to artificial light (as per IS/ISO 105-B02 : 2014 ➤ Reference materials ➤ Humidity test control fabric ➤ Light Source (xenon arc lamp) ➤ black-standard

		thermometer or a black-panel thermometer ➤ Humidity chamber ➤ Covers ➤ Colour matching lamps ➤ Assessment cabinet ➤ Sample mounting card ➤ Assessment mask
8.	Gelling Test, Clause 7.10	➤ Aluminum or Stainless Steel Plate 2mm thick ➤ Glass beaker ➤ Acetone ➤ Stop watch
9.	Adhesion of Print, Clause 7.11	➤ Apparatus as described in D-1.1 of IS 8698 with abrading member as per D-1.2 of IS 8698 ➤ Soap, conforming to Type 1 of IS 285 ➤ The bleached cotton fabric shall correspond to variety No. 1 of IS 177
10.	Flame Resistance, Clause 7.12	➤ Humidity Chamber ➤ Combustion Chamber ➤ Metal Stand ➤ Paper clamps ➤ Specimen holder ➤ Bunsen burner with adjustable stand supplied with commercial propane, butane or LPG ➤ Template ➤ Marker Threads of White mercerized cotton threads having maximum linear density of 50 tex ➤ Combustion chamber as per Annex A of IS 15061:2002 ➤ Fume cupboard ➤ Metal Comb ➤ Stop Watch ➤ Steel Scale
11.	Adhesion of coating, Clause 7.13	➤ UTM ➤ Humidity Chamber ➤ Hot Air Oven ➤ Methyl Ethyl Ketone
12.	Blocking Resistance, Clause 7.14	➤ Hot Air Oven ➤ Stop Watch ➤ Steel Scale ➤ Humidity Chamber ➤ Glass plate (150mmX150mmX3mm) ➤ Dead Weights (5kg)
13.	Resistance to penetration of water,	➤ GSM cutter

	Clause 7.15	➤ Test apparatus as per Annexure H of IS 8698:2022 or Impact penetration tester.
14.	Elongation and elastic recovery for a constant load, Clause 7.16	➤ Dead weight (10 kg) ➤ Stop watch ➤ Steel scale ➤ Test apparatus as per Annexure J of IS 8698:2022
15.	Usable Width, Clause 7.17 and Table 1	➤ Measuring tape ➤ Flat Table ➤ Humidity chamber
16.	Mass of finished fabric, Clause 7.17 and Table 1	➤ Balance, capable of reading to 1 mg or less ➤ Means of maintaining an atmosphere with a relative humidity not greater than 10 % and a temperature of $65^{\circ}\text{C} \pm 5^{\circ}\text{C}$ - Cutter
17.	Breaking/Tensile strength, Clause 7.17 and Table 1	➤ Constant rate of extension (CRE) tensile testing machine as per clause 5.1 of IS 7016 (PART 2) ➤ Clamping device as per clause 5.2 of IS 7016 (PART 2) ➤ Equipment for cutting test pieces and fraying them down to the required width ➤ Equipment in which the test pieces can be immersed in water prior to wet testing ➤ Distilled or deionized water ➤ Wetting agent or surfactant. ➤ Steel Scale ➤ Humidity chamber
18.	Tear Strength, Clause 7.17 and Table 1	➤ Constant rate of extension tensile-testing machine, complying with ISO 1421 ➤ Clamping device ➤ Steel Scale ➤ Humidity chamber
19.	Resistance to damage by flexing, Clause 7.17 and Table 1	➤ Steel Scale ➤ Test apparatus as per method A of IS 7016 part 4 OR De Mattia Flex Tester ➤ Magnification Glass (X5) ➤ Humidity Chamber ➤ Glass rod ➤ Filter paper ➤ Coloured fluid(contains 2% wetting agent)

ANNEX-B

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: Expanded Vinyl Coated Fabric of particular Type, grade & class of flame resistance manufactured under similar conditions with same raw material 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 roll of Expanded Vinyl Coated Fabric, 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 roll of Expanded Vinyl Coated Fabric:

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	Levels of Control		
Cl.	Requirement	Test	Method		No. of Sample	Frequency	Remarks
		Clause Reference	IS Reference				
CI 6.2	Thickness of coated fabric	6.2	IS 8698	R	1	Each control unit	
CI 7.1	Description	7.1	IS 8698	R	1	Each control unit	
CI 7.2	Base fabric	7.2	IS 8698	R	1	Each control unit	
CI 7.3	Appearance	7.3	IS 8698	R	Firm to have adequate in-process controls to check compliance of this parameter as per the requirement given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		
CI 7.4	Colour, grain and finish	7.4 and Annex- B	IS 8698	R	1	Each control unit	
CI 7.5	Coating	7.5	IS 8698	R	Firm to have adequate in-process controls to check compliance of this parameter as per the requirement given in the Indian Standard. However, appropriate records shall be maintained by the manufacturer for evidence of conformity.		

CI 7.6	Resistance to Heat and Loss of mass on heating	7.6 and Annex C	IS 8698	R	1	Once in a week	
CI 7.7	Resistance to cold	7.7	IS 8698	R	1	Each control unit	
CI 7.8	Colour fastness to dry and wet rubbing,	7.8 and Annex D	IS 8698	R	1	Each control unit	
CI 7.9	Colour fastness to light	CI 7.9 and Annexure E	IS 8698 Or IS/ISO 105-B 02	S	1	Once in six months or whenever there is change in raw material.	
CI 7.10	Gelling Test	CI 7.10	IS 8698	R	1	Each control unit	
CI 7.11	Adhesion of print	CI 7.11 and Annexure F	IS 8698	R	1	Once in a week	Applicable for Printed Expanded Vinyl Coated Fabrics
CI 7.12	Flame Resistance	7.12	IS 8698 and IS 15061	R	1	Each control unit	
CI 7.13	Adhesion of coating	--	IS 7016 (Part 5)	R	1	Each control unit	
CI 7.14	Blocking Resistance	--	IS 7016 (Part 9)	R	1	Each control unit	
CI 7.15	Resistance to penetration of water	7.15 and Annexure H	IS 8698	R	1	Each control unit	(Applicable for Grade 1 and 2 of

							Type A and Type B only)
CI 7.16	Elongation and elastic recovery for a constant load	7.16 and Anne J	IS 8698	R	1	Each control unit	(Applicable for Type B only)
CI 7.17 & Table 1	Usable Width	CI 3	IS 7016 (Part 1/Sec 1)	R	1	Each control unit	
-do-	Mass of finished fabric	CI 4	IS 7016 (Part 1/Sec 2)	R	1	Each control unit	
-do-	Breaking strength	--	IS 7016 (Part 2)	R	1	Once in a week	Method 1 of IS 7016 (Part 2) to be used for testing.
-do-	Tear Strength	--	IS 7016 (Part 3/Sec 1)	R	1	Each control unit	
-do-	Resistance to damage by flexing	Method A	IS 7016 (Part 4)	S	1	Once in a month	Method A of IS 7016 (Part 3/ Sec 1) to be used for testing.