



उत्पाद मानुयल
वस्त्रादि - ओपन वीव नारियल जटा भूवस्त्र - विशिष्ट
IS 15869:2020 के अनुसार

PRODUCT MANUAL FOR
Textiles- Open Weave Coir Bhoovastra- Specification as per IS 15869:2020

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन (विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरणके प्रचलन में रीति और पारदर्शिता के सुसंगतता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेन्स धारियों द्वारा संदर्भ सामग्री के रूप में उपयोग किया जाएगा। बीआईएस लाइसेन्स/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, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	उत्पाद Product	:	IS 15869:2020
	शीर्षक Title	:	Textiles- Open Weave Coir Bhoovastra- Specification
	संशोधन संख्या No. of amendments	:	NIL
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines		
a)	कच्चा माल Raw material	:	No specific raw material requirement
b)	समूहिकरण दिशा निर्देश Grouping Guidelines	:	Please refer Annexure-A

c)	नमूने का परिमाण Sample Size	:	
3.	परीक्षण उपकरणों की सूची List of Test Equipment	:	Please refer Annex – B
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	:	Please refer Annex - C
5.	एक दिन में संभावित परीक्षण Possible tests in a day	:	All test are possible to be carried out in a day on pre-conditioned samples (except specific requirements for Ecomark)
6.	लाइसेन्स का कार्यक्षेत्र /Scope of the Licence :		
	IS 15869:2020के अनुसार मानक मुहर का उपयोग करने के लिए लाइसेन्स निम्नलिखित कार्यक्षेत्रके लिए प्रदान किया जाता है Licence is granted to use Standard Mark as per IS 15869:2020 with the following scope:		
	Name of the product	Textiles- Open Weave Coir Bhoovastra- Specification	
	Grade	I, II, III	
	Optional Requirements	With/Without ECO Mark	

BUREAU OF INDIAN STANDARDS

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ANNEXURE A
TO PRODUCT MANUAL FOR
Textiles- Open Weave Coir Bhoovastra-
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GROUPING GUIDELINES

- 1) IS 15869:2020 prescribes constructional details and their requirements of open weave coir bhoovastra (CBV) of three different grades, used in prevention of erosion of soil and, reinforcement of paved and unpaved roads.
- 2) The open weave CBV shall have the following grades based on the mass:
Grade I- having mass of 400 g/m², Grade II- having mass of 700 g/m², Grade III- having mass of 900 g/m²
- 3) The CBV shall conform to the constructional and other requirements as per Table 1. Specific requirements for Ecomark are specified at Table 2.
- 4) In view of above, the following Grouping Guidelines shall be considered for the purpose of GoL/CSoL:-
 - a) **Sample of each grade of CBV shall be drawn and tested**
 - b) **In case it is intended to cover ECO Mark in the licence, the sample (s) shall be tested for the specific requirements for ECO Mark**
- 5) While considering grant of licence/inclusion of additional varieties, it shall be ensured that complete manufacturing/testing facility is available with manufacturer.
- 6) During operation of licence, BOs shall ensure that all varieties covered in the licence shall be tested in rotation to the extent possible

Annexure B to the Product Manual of
Textiles- Open Weave Coir Bhoovastra-
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LIST OF TEST EQUIPMENTS

Major test equipment essentially required to test as per requirements of Indian Standard.

Sl. No.	Tests Used in with Clause Reference	Test Equipment/Chemicals and Identification Numbers (Where applicable)
1.	Mass per unit area, g/m ² , Requirements of Coir Bhoovastra, Table 1, Clause 5	Sample Preparation/Cutting Equipment, Analytical Balance (0.1% Accuracy), Steel Scale, Vernier Caliper
2.	Width, cm, Length, m, Requirements of Coir Bhoovastra, Table 1, Clause 5	Flat Surface, Steel Scale, Steel Tape, Vernier Caliper
3.	Thickness at 2kPa, mm, Requirements of Coir Bhoovastra, Table 1, Clause 5	Thickness tester, Interchangeable pressure-foot, Reference plate Gauge, Stop Watch, Sample Preparation/Cutting Equipment, Conditioning Chamber
5.	Runnage, m/kg, Break Load, Dry and Wet, Peak Load, Dry and Wet, Requirements of Coir Bhoovastra, Table 1, Clause 5	Tensile Testing Machine, Extensometer, Distilled Water, Non-ionic wetting agent, Sample Preparation/Cutting Equipment, Conditioning Chamber
6.	Trapezoidal Tearing Strength at 25 mm Gauge Length, kN, Requirements of Coir Bhoovastra, Table 1, Clause 5	CRE type Tensile Testing Machine, Clamps, Trapezoidal Template, Water Bath maintained at 27±2 °C, Non-Ionic Wetting Agent, Sample Preparation/Cutting Equipment, Conditioning Chamber
7.	Mesh Size, mm, Requirements of Coir Bhoovastra, Table 1, Clause 5	Overhead Projector, Sample Preparation/Cutting Equipment, Screen, Scale
8.	Residual Pesticides (sum parameter), Specific Requirements for Ecomark, Table 2, Clause 6.5	Analytical Balance, Sample Preparation/Cutting Equipment, Soxhlet Extraction Apparatus, n-Hexane, Dichloromethane, Petroleum Ether, Diethyl Ether AR grade, General Glasswares, Evaporator, Glass Column, Stopcock, Glass Wool, Anyhdrous Sodium Sulphite, Celite 545 Plus, HPLC,

		GC-ECD/MSD, Boron Trifluoride, Water Bath
9.	pH of Aqueous Extract, Specific Requirements for Ecomark, Table 2, Clause 6.5	Analytical Balance, Sample Preparation/Cutting Equipment, General Glasswares, Distilled Water, Reflux Condenser, Hot Plate, Ground Glass Stopper, pH meter
10.	Free and releasable formaldehyde, Specific Requirements for Ecomark, Table 2, Clause 6.5	<u>Water Extraction Method</u> Distilled Water or Grade 3 water, Acetylacetone reagent Formaldehyde solution, Ethanolic solution of dimedone Stoppered volumetric flasks, Flask, Pipettes Burettes, Spectrophotometer, Test tubes or spectrophotometer tubes, Water bath, Filters Balance <u>Vapour Absorption Method</u> Distilled water or grade 3 water, Acetylacetone reagent, Formaldehyde solution, Glass preserving jars, Small wire-mesh baskets, Incubator, Stoppered volumetric flasks, Pipettes, Burettes, Spectrophotometer, Test tubes or spectrophotometer tubes, Water bath, Balance
11.	Extractable heavy metals by artificial acidic sweat, Requirements for Ecomark, Table 2, Clause 6.5	Analytical Balance, General Glasswares, L-Histidine monohydrochloride, Sodium chloride, Sodium dihydrogen orthophosphate, Water — Metal free (Ultra pure water), Acetic acid, Water Bath, Filter Paper, Concentrated Nitric Acid, Hot Plate, Atomic Absorption Spectrometer, Standard Solutions of Heavy Metals
12.	Pentachlorophenols(PCP), Requirements for Ecomark, Table 2, Clause 6.5	Acetone (AR Grade), n-Hexane (AR Grade), n-Hexane (HPLC Grade), Con. Sulphuric Acid (AR Grade), Celite 545, Anhydrous Sodium Sulphate (AR Grade), Whatman Filter Paper & Thimble, Glass Wool, Pentachlorophenol (PCP), High purity >99%, Tetrachlorophenol (TeCP), High purity >99%, Hexachlorobenzene (HCB), High purity >99%, Acetic anhydride Solution (AR Grade), Trimethylamine solution (AR Grade), Analytical Balance, Titration Assembly, Soxhlet Extractor Assembly, Vacuum Evaporator, Ultrasonic Bath, Water Bath, GC-ECD/GC-MS
13.	Banned aryl amines from azo dyes, Requirements for Ecomark, Table 2, Clause 6.5	Methanol (HPLC Grade), Diethyl ether (HPLC Grade), Citrate-sodium Hydroxide Buffer Solution, Aqueous Sodium Dithionite Solution, Standard Amines of Highest Available Purity, Standard Amine Solutions, Calibration Solutions, Sodium Dithionite (Purified/LR), Sodium Sulphate (LR), High Performance Thin Layer Chromatograph (HPTLC), High Performance Liquid Chromatograph (HPLC) with Diode Array Detector (DAD), Gas Chromatograph-Mass Spectrometer (GC-MS), 30 ml Reaction Vessel, Water Bath Shaker, Centrifugal Evaporator (Turbo Evaporator), 5, 2 and 1 ml pipettes (Class A), 60 ml Separating Funnel, 100 ml Beaker, 25 ml, 50 ml Burette (Class A), Amber Coloured Bottles for Reference

		Standard	Solution,	Test	Tubes

Note 1: The above is an indicative list for the purpose of guidance only and may not be treated as exhaustive

ANNEXURE C
TO PRODUCT MANUAL FOR
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SCHEME OF INSPECTION AND TESTING

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 and implement 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. LABELLING, MARKING, PACKING - The Standard Mark as given in schedule of the licence and Licence Number (i.e. CM/L) shall be incorporated on each roll, and the marking and packing shall be done as per the provisions of the Indian Standard, provided always that the product thus marked conform to all the requirements of the specification.

4. CONTROL UNIT – For the purpose of this scheme, a control-unit is defined as the entire quantity of CBV (Coir Bhoovastra) manufactured under similar conditions in a single day from the same raw material.

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.

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

6. TEST CERTIFICATE - For each consignment of BIS Certified material conforming to **IS 15869:2020** there shall be a test certificate which shall contain the Standard Mark, the cast/Control Unit number and the corresponding test results (as given in Annexure-I enclosed)

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 re-salable be sheared or cut or deformed in such a manner that it cannot be used for any other purpose except re-melting. A separate record shall be maintained giving information on quantity and cast number/control unit number, as applicable, relating to all such rejections/defective/sub-standard 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

(1)				(2)	(3)		(4)
TEST DETAILS					LEVELS OF CONTROL		REMARK S
Clause	Requirements	Test Method		Test equipment requirement R: required (or) S: Sub- contracting permitted	No. of Samples	Frequency	
		Clause	Reference				
Clause 5, Table 1	Requirements of Coir Bhoovastra						
i)	Mass per unit area	---	IS 15868 (Parts 1 to 6)	R	One	Each Control Unit	----
ii)	Width	----	IS 12503 (Parts 1 to 6)	R	One	Each Control Unit	Width can be either 100 cm or as required
iii)	Length	----	IS 12503 (Parts 1 to 6)	R	One	Each Control Unit	Length can be either 50 m or as required
iv)	Thickness at 2kPa	----	IS 15868 (Parts 1 to 6)	R	One	Each Control Unit	----
v)	Runnage a) Ends(warp) b) Picks(weft)	----	IS 16635	R	One	Each Control Unit	----
vi)	Break Load, Dry a) Machine Direction b) Cross Machine Direction	----	IS 16635	R	One	Each Control Unit	----
vii)	Break Load, Wet a) Machine Direction b) Cross Machine	----	IS 16635	R	One	Each Control Unit	----

	Direction						
viii)	Peak Load, Dry a) Machine b) Cross Machine Direction	----	IS 16635	R	One	Each Control Unit	----
ix)	Peak Load, Wet a) Machine b) Cross Machine Direction	----	IS 16635	R	One	Each Control Unit	----
x)	Trapezoidal Tear Strength at 25 mm gauge length a) Machine b) Cross Machine Direction	----	IS 14293	R	One	Each Control Unit	----
ix)	Mesh Size	---	IS 15868 (Parts 1 to 6)	R	One	Each Control Unit	----
cl.6.5, Table 2	Specific Requirements for Ecomark						
i)	Residual Pesticides(sum parameter)	Annex D	IS 15651	S	One	Once in an year	Applicable for CBV being marked with Ecomark
ii)	pH of aqueous extract	Annex H	IS 8391 (Part 1)	S	One	Once in an year	----do----
iii)	Free and releasable formaldehyde	----	IS 14563 (Parts 1 and 2)	S	One	Once in an year	----do----
iv)	Extractable Heavy Metals by artificial acidic sweat	Annex A	IS 15651	S	One	Once in an year	----do----

v)	Pentachlorophenols(PCP)	Annex B	IS 15651	S	One	Once in an year	----do----
vi)	Banned aryl amines from azo dyes	----	IS 15570	S	One	Once in an year	----do----

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 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.