



उत्पाद मानुयल

जूट के भू वस्त्र

भाग १ सड़क के सब ग्रेड को मज़बूती प्रदान करने हेतु -विशिष्ट

IS 14715 (Part 1):2016 के अनुसार

**PRODUCT MANUAL FOR
Jute Geotextiles Part 1 Strengthening of
Sub-Grade in Roads- Specification as per IS 14715 (Part 1):2016**

भारतीय मानक ब्यूरो (अनुरूपता मूल्यांकन (विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरणके प्रचलन में रीति और पारदर्शिता के सुसंगत 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 14715 (Part 1):2016
	शीर्षक Title	:	Jute Geotextiles Part 1 Strengthening of Sub-Grade in Roads- 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	:	Sample of each type (woven, non-woven) of jute geo textile shall be drawn and tested

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	:	On pre-conditioned samples: All tests except Average Opening Size (A.O.S), O_{95}
6.	लाइसेन्स का कार्यक्षेत्र /Scope of the Licence :		
	IS 14715 (Part 1):2016 के 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 14715 (Part 1):2016 with the following scope:		
	Name of the product	Jute Geotextiles Part 1 Strengthening of Sub-Grade in Roads- Specification	
	Type	Woven, Non-Woven	

BUREAU OF INDIAN STANDARDS

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**ANNEXURE A
TO PRODUCT MANUAL
FOR
Jute Geotextiles Part 1 Strengthening of
Sub-Grade in Roads- Specification as per IS 14715 (Part 1):2016**

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.	Weight at 20 percent moisture regain, g/m ² , Requirements for Woven Geotextiles, Table 1, Clause 4	Sample Preparation/Cutting Equipment (see IS 14706), Conditioning Chamber, Analytical Balance (L.C. 10 mg)
2.	Width, cm, Requirements for Woven Geotextiles, Table 1, Requirements for Non-Woven Jute Geotextiles, Table 2, Clause 4	Calibrated Steel Rule, Flat Surface, Conditioning Chamber
3.	Ends x Picks/dm, Requirements for Woven Geotextiles, Table 1, Clause 4	<u>Method A (as per IS 1963)</u> Conditioning Chamber, Thread Counter equipped with a low power microscope, Flat Table <u>Method B(as per IS 1963)</u> Clamps, Forceps, Flat Table
4.	Thickness at 2kPa, mm, Requirements for Woven Geotextiles, Table 1, Clause 4	Thickness tester, Removable pressure-foot, Reference plate Gauge, Stop Watch, Sample Preparation/Cutting Equipment, Conditioning Chamber
5.	Tensile Strength in MD x CD, kN/m, Elongation at break in MD X CD, percent, Requirements for Woven Geotextiles, Table 1, Clause 4	Tensile Testing Machine, Extensometer, Distilled Water, Non-ionic wetting agent, Sample Preparation/Cutting Equipment, Conditioning Chamber

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6.	Puncture Resistance, kN Requirements for Woven Geotextiles, Table 1, Clause 4	Specimen Sample Holder, Water Container, Testing Frame, Fall Cone, Penetration Measuring Cone, Sample Preparation/Cutting Equipment
7.	Burst Strength, kPa Requirements for Woven Geotextiles, Table 1, Requirements for Non-Woven Jute Geotextiles, Table 2, Clause 4	Bursting Tester Conditioning Chamber
8.	Permittivity at 50 mm constant head, sec^{-1} Requirements for Woven Geotextiles, Table 1, Requirements for Non-Woven Jute Geotextiles, Table 2, Clause 4	Water Permeability Tester, De-Aired Water, Conditioning Chamber
9.	Apparent Opening Size (A.O.S), O_{95} , Micron Requirements for Woven Geotextiles, Table 1, Requirements for Non-Woven Jute Geotextiles, Table 2, Clause 4	Mechanical Sieve Shaker, Pan, Cover, 200 mm Diameter Sieves, Spherical Glass Beads or Graded Sand Particles, Balance (L.C. 0.05 g), Static Eliminating Device, Drying Oven, Pan for collecting Sieved Beads, Distilled Water
10.	Mass, g/m^2 Requirements for Non-Woven Jute Geotextiles, Table 2, Clause 4	Die, Template, Steel Rule, Balance, Conditioning Chamber
11.	Thickness at 2 kPa, mm Requirements for Non-Woven Jute Geotextiles, Table 2, Clause 4	Two circular horizontal plates, Thickness Measuring Device (L.C. 0.01 mm), Stop Watch, Sample Preparation/Cutting Equipment, Pressure-foot, Conditioning Chamber
12.	Tensile Strength, kN/m, Elongation at break, percent Requirements for Non-Woven Jute Geotextiles, Table 2, Clause 4	Tensile Testing Machine, Clamps, Sample Preparation/Cutting Equipment, Conditioning Chamber

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
Jute Geotextiles Part 1 Strengthening of
Sub-Grade in Roads- Specification as per IS 14715 (Part 1):2016

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 jute geotextiles, of each type 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 14715 (Part 1):2016** 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 4, Table 1	Requirements of Woven Jute Geotextiles						
i)	Construction	---	IS 14715 (Part 1)	R	Adequate inspection to ensure that the material conforms to the requirements of the specification		
ii)	Weight at 20 percent moisture regain	----	IS 14716	R	One	Each Control Unit	----
iii)	Width	----	IS 1954	R	One	Each Control Unit	----
iv)	Ends x Pics/dm	----	IS 1963	R	One	Each Control Unit	----
v)	Thickness at 2kPa	----	IS 13162 (Part 3)	R	One	Each Control Unit	----
vi)	Tensile Strength in MD X CD	----	IS 16635	R	One	Each Control Unit	----
vii)	Elongation at break in MD X CD	----	IS 16635	R	One	Each Control Unit	----
viii)	Puncture Resistance	----	IS 13162 (Part 4)	R	One	Each Control Unit	----

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ix)	Burst Strength	---	IS 1966 (Part 1) IS 1966 (Part 2)	R	One	Each Control Unit	----
x)	Permittivity at 50 mm constant head	---	IS 14324	R	One	Once in a month	----
xi)	Apparent Opening Size (A.O.S)	----	IS 14294	R	One	Once in a week	----
Clause 4 Table 2	Requirements for Non-Woven Jute Geotextiles						
i)	Width	----	IS 1954	R	One	Each Control Unit	----
ii)	Mass	---	IS 15981 (Part 1)	R	One	Each Control Unit	----
iii)	Thickness at 2kPa	----	IS 15891 (Part 2)	R	One	Each Control Unit	----
iv)	Tensile Strength	----	IS 15981 (Part 3)	R	One	Each Control Unit	----
v)	Elongation at break	----	IS 15981 (Part 3)	R	One	Each Control Unit	----
vi)	Permittivity at 50 mm constant head	---	IS 14324	R	One	Once in a month	----
vii)	Burst Strength	---	IS 1966 (Part 1) IS 1966 (Part 2)	R	One	Each Control Unit	----
viii)	Apparent Opening Size (A.O.S) ,O ₉₅	----	IS 14294	R	One	Once in a week	----

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.

