



उत्पाद मानुयल
Specification for Common Proofed Canvas/Duck and Paulins (Tarpaulins)
IS 2089:1977 के अनुसार
PRODUCT MANUAL
FOR
Specification for Common Proofed Canvas/Duck and Paulins (Tarpaulins)
ACCORDING TO IS 2089:1977

भारतीय मानक ब्यूरो)अनुरूपता मूल्यांकन (विनियम की स्कीम-I के तहत यह उत्पाद मानुयल प्रमाणीकरणके प्रचलन मे रीति और पारदर्शिता के सुसंगता सुनिश्चित करने के लिए सभी क्षेत्रीय/शाखा कार्यालयों एवं लाइसेन्स धारियों द्वारा संदर्भ सामग्री के रूप मे 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 2089:1977
	शीर्षक Title	:	Specification for Common proofed canvas/duck and paulins (Tarpaulins)
	संशोधन संख्या No. of Amendments	:	2
2.	नमूनाकरण दिशा निर्देश Sampling Guidelines:		
a)	कच्चा माल Raw material	:	<u>For Common Proofed Canvas/Duck</u> a) Cotton Canvas as per IS 1424 b) Cotton Duck as per IS 1422 <u>For Common Proofed Paulins(Tarpaulins)</u>

		a) Eyelet: Aluminium Alloy NS₂ or NS₄ or brass eyelet conforming to size 30 of IS 4084 b) Sewing Thread: 165 tex x 3 linen thread having a minimum breaking load of 8 kgf (single thread breaking load on 50 cm test length using constant rate of traverse machine) or rot-proofed Cotton Thread conforming to variety no.18 or 43 of IS 1720, c) Twinning Whipping: Cotton thread conforming to variety No.8,19 or 36 of IS 1720. Warp thread of proofed fabric of variety no.2 of IS 1422 may also be used d) Rope lashing: Indian Sisal conforming to IS 1321 (Part 1) or IS 1321 (Part 2) or Hemp Rope conforming to IS 5176 lashings of 12 mm diameter and made from 3 strands
b)	समूहिकरण दिशा निर्देश Grouping guidelines	: If sample of higher variety (material for basic fabric) is drawn, lower may be considered for GoL/CSoL i.e. if sample of variety number 1 is drawn, other varieties like 2, 3 and 4 may also be covered in the scope of the licence
c)	नमूने का परिमाण Sample Size	: 3 meter
3.	परीक्षण उपकरणों की सूची List of Test Equipment	: Please refer ANNEX – A
4.	निरीक्षण व परीक्षण स्कीम Scheme of Inspection and Testing	: Please refer ANNEX – B
5.	एक दिन में संभावित परीक्षण/Possible tests in a day: Sweating test, Pliability test, Pressure head test, Bag test, Breaking Strength, Free Acidity and Alkalinity, Ash content, Determination of Copper and Zinc, Dimensions of Paulins(Tarpaulins) as per cl.4.3.	
6.	लाइसेन्स का कार्यक्षेत्र /Scope of the Licence : IS 2089:1977 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 2089 : 1977 with the following scope:	
	Name of the product	Common Proofed Canvas/Duck, Common Proofed Paulins(Tarpaulins)
	Material for Basic Fabric	Variety No.1,2,3,4
	Shade and Dimensions of Paulins (Tarpaulins)	As agreed to between the manufacturer and purchaser
	Any other Information	Dyed Base Material for Common Proofing, Hook Joints on Paulins (Tarpaulins), Seams of Paulins Painted with Liquid

		Proofing Mixture, Paulins(Tarpaulins) supplied with Lashing Ropes or any other requirement specifically agreed with the purchaser
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Annex A
TO THE PRODUCT MANUAL
For Specification for Common Proofed Canvas/Duck and Paulins (Tarpaulins) as per IS 2089:1977

List of test Equipment

Sl. No.	Tests used in with clause reference	Test Equipment / Chemicals
1	Basic Fabric (Cl.3.1)	Tensile Testing machine, eyeglass, analytical balance, atmosphere condition chamber or large desiccators with Magnesium nitrate saturated solution as a desiccant
2	Common Proofing (Cl.3.2, 3.3.1)	Soxhelt apparatus, beaker 250ml and 500ml, Hot plate, Oven, analytical balance, filter paper, Carbon tetra chloride, rectified spirit, mild soap Conditioning Room ($27\pm 2^{\circ}\text{C}$, 65 ± 2 RH)
3	Resistance to Microbial attack (Cl. 3.3.2, 3.3.2.1)	Soxhelt apparatus, beaker 250ml and 500ml, Hot plate, Oven, analytical balance, filter paper, silica dish, crucible, what men filter paper, sintered glass crucible no.4, water suction pump, Benzene, concentrate Sulphuric Acid, Conc. Nitric acid, Hydrochloric acid, Ammonia, Acetic acid, Potassium Iodide, Sodium Thiosulphate, Starch Indicator, Ammonium chloride, Ammonium hydroxide, Methyl Orange indicator,
4	Chemical requirements (Cl.3.3.3, Table 1)	
i	Free acidity	500ml beaker, hot plate, funnel , Methyl Orange, Phenolphthalein indicator, PH meter
ii	Ash ,percent by mass	Silica crucible, electric muffle furnace or gas burner
iii	Aluminium oxide content	Soxhelt apparatus-500ml, beaker 250ml and 500ml, Hot plate, Oven, analytical balance , filter paper, silica dish, crucible, what men filter paper, sintered glass crucible no 5, water suction pump, Carbon Tetrachloride, Hydrochloric acid, Ammonium nitrate, Ammonium chloride
5	Pliability (Cl.3.3.4)	Ice box or refrigerator
6	Sweating test (Cl.3.3.5)	Oven, Two heavy plates, filter paper, blotting papers
7	Breaking Strength (Cl. 3.3.6)	Tensile Testing machine minimum capacity 50-250kgf
8	Water proofness (Cl.3.3.7)	
i	Pressure head test (Cl.3.3.7.1, Table-2)	Pressure head testing machine as per IS 7016 (Part 7)
ii	Cone test (Cl.3.3.7.2)	Open Metal Conical Ring Frame, Water, Conditioning Room ($27\pm 2^{\circ}\text{C}$, 65 ± 2 RH)
9	Bag test (Cl.4.4)	200mm high bag formed in a frame

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

Annex B
TO THE PRODUCT MANUAL
For Specification for Common Proofed Canvas/Duck and Paulins (Tarpaulins) as per IS 2089:1977

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.

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. **LABELLING AND MARKING** – The Standard Mark as given in the Schedule of the license shall be legibly and indelibly marked at one corner of common proofed paulins, provided always that the common proofed paulin on which the mark is thus applied conforms to the various requirements of the relevant specification.

In addition, the following information shall be indelibly marked at one corner of one side of each common proofed canvas duck paulins:

- a) Name of manufacturer, initials, or registered trade-mark, if any;
- b) Name of the material;
- c) Size of the common proofed paulin;
- d) Year of manufacture, serial no;
- e) Any other information required by the buyer or by the law in force.

Packing of the material shall be done as per cl.4.2. of IS 2089:1977.

4. **CONTROL UNIT** – For the purpose of this scheme, entire quantity of common proofed paulins fabricated in a single day from one source of supply of treated fabric received at a time shall be considered as 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 Common Proofed Paulin:** Each consignment of common proofed paulins shall be conforming to the requirements of the specification. The number of samples to be tested per consignment would be according to column 1 and column 2 of Table 3 of IS 2089:1977. Test Records shall be maintained in accordance with paragraph 2 above.
- 5.2** Each consignment of sewing thread, rope/lashings, twine whipping and brass eyelets shall be certified by the suppliers for conformity to the requirements as laid down in clause 4.1 of the specification and test records shall be maintained. Alternatively one sample from each consignment shall be tested and appropriate records of the test results maintained.
- 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.

**SCHEME OF INSPECTION AND
TESTING FOR IS 2089:1977
TABLE 1: LEVELS OF CONTROL**

(Para 5 of the Scheme of Inspection and Testing)

(1)				(2)	(3)		(4)
Test Details				Test equipment requirementR: required (or) S: Sub-contracting permitted	Levels of Control		Remarks
Clause No.	Requirements	Test Method			No. of Samples	Frequency	
		Clause	Reference				
Requirements for Pre-fabricated Paulins							
3.1	Basic Fabric	Table 1 & 2	IS 1422 / IS 1424	R	As per column 1 & 2 of Table 3 of IS 2089	Each Consignment	-----
3.2,3.3.1	Common Proofing	App.A-1 & A-2	IS 2089	R	As per column 1 & 2 of Table 3 of IS 2089	Each Consignment	-----

3.3.2,3.3.2.1	Resistance to Microbial attack	App.A-2	IS 2089, IS 1389	R	As per column 1 & 2 of Table 3 of IS 2089	Each Consignment	-----
3.3.3	Chemical requirements	Table 1	IS 2089				
i	Free acidity	App.A-3	IS 2089	R	-do-	-do-	-----
ii	Ash ,percent by mass	App.A-4	IS 2089	R	-do-	-do-	-----
iii	Aluminium oxide content	App.A-4	IS 2089	R	-do-	-do-	-----
3.3.4	Pliability	3.3.4	IS 2089	R	-do-	-do-	
3.3.5	Sweating test	6.2	IS 2089 IS 1422/IS1424	R	-do-	-do-	
3.3.6	Breaking Strength	11	IS 1969(Part 1)/IS 1969 (Part 2)	R	-do-	-do-	
3.3.7	Water proofness						
3.3.7.1, Table 2	Pressure head test	App.B	IS 1389	R	-do-	-do-	
3.3.7.2	Cone test	6.3	IS 2089	R	-do-	-do-	
Requirements for fabricated/finished paulins							
4.4	Bag test	4.4	IS 2089	R	Each paulin	-do-	

4.2	Manufacture	4.2	IS 2089	R	Each paulin	Each Control Unit	
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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: S.No. 1 to 8 pertains to prefabricated Paulin and S.No. 9 & 10 pertains to fabricated Paulin i.e. finished paulins.

Note 3: Clauses 3.1, 3.2, 4.1.1.2, 4.2.1, 4.2.2, 4.2.3, 4.2.4, 4.2.6 and 7.2 call for agreement between the purchaser and supplier.

Note 4: 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.