



PM/ IS 8391 (Pt1)/ 1/ Dec 2019

**PRODUCT MANUAL FOR  
RUBBERIZED COIR SHEETS FOR CUSHIONING (Part 1: Curled)  
According to IS 8391 (Part 1): 2019**

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>	:	<b>IS 8391 (Part 1): 2019</b>
	<b>Title</b>	:	<b>Rubberized Coir Sheets For Cushioning (Part 1: Curled)</b>
	<b>No. of amendments</b>	:	<b>NIL</b>
2.	<b>Sampling Guidelines</b>		
a)	<b>Raw material</b>	:	No specific requirement for raw material
b)	<b>Grouping Guidelines</b>	:	Please refer Annex - A
c)	<b>Sample Size</b>	:	Two sheets at full manufacturing shape and dimension for all tests including destructive tests
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>	:	Please refer Annex - D
6.	<b>Scope of the Licence :</b>		
	Licence is granted to use Standard Mark as per IS 8391 (Part 1):2019 with the following scope:		
	<b>Name of the product</b>	<b>Rubberized coir sheets for cushioning, Part 1: Curled</b>	
	<b>Grade</b>	[Grade(s) to be mentioned]	
	<b>Size</b>	[Range of length or width, and range of thickness to be mentioned]	



**ANNEXURE A  
TOPRODUCT MANUAL FOR  
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**GROUPING GUIDELINES**

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1. When a sample of Extra Firm Grade is tested, Firm and Medium grade can be included in the license.
2. When a sample of Firm grade is tested, Medium grade can be included in the license.
3. When as sample of thickness between 12-38 mm is tested, thickness <38mm may be included in the scope of license for a particular grade.
4. When as sample of thickness of over 100 mm is tested, thickness between 38 to tested thickness may be included in the scope of license for a particular grade.

While considering grant of licence/inclusion of additional varieties, it shall be ensured that complete manufacturing/testing facility is available with manufacturer. 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**  
**TOPRODUCT MANUAL FOR**  
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**LIST OF TEST EQUIPMENT**  
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Major test equipment required to test as per requirements of Indian Standard.

Sr. No.	Test Equipment	Tests used in with Clause Reference
1	Steel Scale	Shape and Dimensions, Cl 6 (Length and Width)
2	Thickness Measuring Instrument as per Cl A 2.2	Shape and Dimensions, Cl 6 (Thickness)
3	Indentation hardness test apparatus	Indentation hardness, resistance to ageing Cl 7.2 and Cl 7.3
4	Weighing scale with digital display	Indentation hardness, resistance to ageing Cl 7.2 and Cl 7.3
5	Hot air oven with temperature controller and digital display	Resistance to ageing, compression set Cl 7.3, Cl 7.5, 7.6
6	Flexing test apparatus with counter	Resistance to flexing, Cl 7.4
7	Humidity Chamber with Digital Controller	Conditioning of samples, Cl 8.1.6
8	pH meter	pH value, Cl 7.7
9	Compression test apparatus with heating element	Compression set, Cl 7.5, 7.6
10	Weighing balance	pH, chloride, sulphate content Cl 7.7, 7.8, 7.9
11	Reflux condenser with ground glass joint, Round bottom flask, conical flask with ground glass stopper, dark glass stoppered bottle, heating mantle, funnels, beakers, burettes, pipettes and other glass ware as required	chloride, sulphate content Cl 7.8, 7.9
12	Buffer tablets of pH 4.0 and 9.0 Calcium carbonate (Chloride free), Potassium Chromate, Std Silver Nitrate Solution 0.1N, Sodium Chloride, Distilled Water, Benzidine Hydrochloride, Barium Chloride, Hydrochloric acid, sulphuric acid, sodium hydroxide, sodium sulphate, phenol red indicator, alcohol-95%, Whatman filter paper No. 42 and other chemicals and reagents as required	pH, chloride, sulphate content Cl 7.7, 7.8, 7.9
13	Air conditioner (s)	

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



**ANNEXURE C**  
**TOPRODUCT MANUAL FOR**  
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**SCHEME OF INSPECTION AND TESTING**

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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.

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 Column (1) of the First Schedule of the license shall be incorporated on the label attached with rubberized coir sheet (as supplied), and the labeling/marketing and packing shall be done as per the provisions of the Indian Standard, provided always that the rubberized coir sheet thus marked conforms to all the requirement of the specification. In addition, details of BIS Manakonline website shall be marked as follows: “For details of BIS certification please visit [www.manakonline.in](http://www.manakonline.in)”
4. **CONTROL UNIT** – For the purpose of this scheme, all the rubberized coir sheets of the same grade manufactured in a day from one formulation of compounded rubber latex 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.

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

6. **STORAGE** – Instructions for storage as given in the Indian Standard shall be complied.
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.



**ANNEXURE C**  
**TOPRODUCT MANUAL FOR**  
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**SCHEME OF INSPECTION AND TESTING**

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**TABLE 1: LEVELS OF CONTROL**

(1)				(2)	(3)			(4)
Test details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control			Remarks
Clause	Requirements	Test Method		No. of Samples	Lot size	Frequency		
		Clause	Reference					
5.1 & 5.2	Manufacture, workmanship and finish	5.1, 5.2	IS 8391 (part 1):2019	R	Each		In case of failure of 10 continuous sheets produced shall be tested and original frequency restored only when all the 10 sheets pass the test	
6.1 & 6.2	Shape and dimensions	6.1, 6.2	Annex B of IS 8391 (part 1):2019	R	Two	One hour's production		Every hour
7.2	Indentation hardness	7.2	Annex D of IS 8391 (part 1):2019	R	One	One control unit		Each control unit
7.1	Density	7.1	Annex C of IS 8391 (part 1):2019	R	One	One control unit		Each control unit
7.3	Resistance to ageing	7.3	Annex E of IS 8391 (part 1):2019	R	One	-do-		Every 5 <sup>th</sup> control unit
7.4	Resistance to flexing	7.4	Annex F of IS 8391 (part 1):2019	R	One	-do-		-do-

7.5 & 7.6	Compression set	7.5, 7.6	Annex G of IS 8391: (Part	R	One	-do-	Every 5 <sup>th</sup> control unit
7.7	pH value	73.7	Annex H of IS 8391: (Part 1):2019	R	One	-do-	Every control unit
7.8	Chloride content	7.8	Annex J of IS 8391: (Part 1):2019	R	One	-do-	Every 5 <sup>th</sup> Control unit
7.9	Sulphate content	7.9	Annex K of IS 8391: (Part 1):2019	R	One	-do-	Every 5 <sup>th</sup> 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.



**ANNEXURE D**  
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**POSSIBLE TESTS IN A DAY**  
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<b>S.NO.</b>	<b>TEST</b>	<b>CLAUSE</b>
1	Shape and dimensions	5
2	Manufacture, workmanship and finish	4
3	Indentation hardness	6.1
4	Density	7.1
5	Determination of pH value	6.5
6	Determination of chloride content	6.6
7	Determination of sulphate content	6.7

**Note:** This is an indicative list of the possible tests that can be carried out in a single day during the inspection.