

**SPECIFICATION No. RDSO/M&C/RP-165/2020 (Revision 1.0)**

Government of India  
**Ministry of Railways**

*Indian Railway Standard Specification for*  
**Fire Resistant Jute Fabric (Revision 1.0)**

**M&C Directorate**  
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## 0. FOREWARD

- 0.1 This specification is issued under fixed Sl. No. RDSO/M&C/RP-165/2020 (Revision 1.0) the final number indicates the year of adoption as standard or in case of revision, the, year of last revision or the year of reaffirmation.
- 0.2 This specification was first adopted in year 1990 and is intended to cover the technical provisions relating to materials, constructions and tests, and does not include all the necessary provisions of the contracts.
- 0.3 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value observed on calculated, expressing the result of a test or analysis, shall be rounded off in accordance with the IS:2:1960 (Reaffirmed 2016). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.
- 0.4 This specification draws reference to specifications IS: 2818:2015 (part I), IS: 2387:1969 (Reaffirmed 2018), IS: 1963 :1981 (Reaffirmed 2018), IS:7016 (part IV) :2003 (Reaffirmed 2019) :, IS:10036 (part I):1982 (Reaffirmed 2016), IS:2873:1991 (Reaffirmed 2016), IS: 4744: 1991 (Reaffirmed 2016) & BS: 3119. The latest versions of these standards shall be taken as references.
- 0.5 During the course of development based on data, ‘limiting oxygen index’ shall be incorporated in the review as required as an alternative method for fire resistance properties.

## 1. SCOPE

This specification prescribes the requirements and method of tests for treated jute fabric for use as fire resistant barrier on foam cushions in coaching stock.

## 2. REQUIREMENTS

**Description** – Jute fabric of appropriate quality shall be treated with fire resistance materials so as to conform to the requirements of this standard.

**Dimension & tolerances** – The length and width of the treated fabrics shall be as agreed to between the purchasers and suppliers. A tolerance of +3/-0 cm for nominal width up to and including 100 cm and +3/-0% for nominal width with over 100 cm shall be applicable. The length of the fabric shall not be less than the declared or marked length.

- 2.3 Colour** - The colour of the treated fabric shall be natural colour of the jute or as agreed to between the purchasers and the suppliers.

**2.4 Workmanship & finish** – The treated fabric shall be calandered to impart smooth finish. The fabric should be generally free from the wet stains, fungus and mildew growth, repaired warp smash with majority of the knots falling within 5 cm along the length of the cut, Gout, Float in warp and weft of two consecutive yarns, Torn selvedge and weft crack exceeding one pick.

**2.5 Physical properties of the treated fabric -**

Treated fabric shall comply with the following requirements:

Sl No.	Properties	Specified values	Method of test
1.	Weight/sq. m*	450 ± 50	IS : 2387*1969 (Reaffirmed 2018)
2.	Ends/dm	96±4	IS : 1963: 1981 (Reaffirmed 2018)
	Picks/dm	48±4	
3.	Breaking Strength (kg/5 cm width), Min		IS : 2818 (Part I) 2015
	Warp way	100	
	Weft way	35	
4.	Resistance to damage by flexing (no of flexing cycles in thousands), Min	250	IS : 7016 (Part IV) 2003 (Reaffirmed 2019) (De-Mattia method)

\* Assuming R = 0 in the formula under clause 5.2.2

**Resistance to Spread of Flame**

2.5.2.1 The treated fabric shall be tested for resistance to spread of flame as per BS: 3119. The flame shall be applied on the specimen for a period of 30 seconds and then withdrawn for 30 seconds. The flame is again applied for a period of 30seconds. Should the specimen ignite and continue to burn, it shall extinguish within 10 seconds after the source of flame is withdrawn.

**3. Sampling and Criteria for Conformity**

3.1 Shall be as per IS: 10036 (Part I) 1982 (Reaffirmed 2016).

**4. Packing**

- 4.1** The treated fabric shall be supplied in tapped cuts, packed in bale form or in roll form as agreed to between the purchaser and supplier. Packing of the bales and the rolls shall be as per IS: 2873:1991 (Reaffirmed 2016) and IS: 4744: 1991 (Reaffirmed 2016) respectively.

**5. Marking**

- 5.1** Unless otherwise agreed to between the purchaser and the supplier, the consignment in packages shall be marked with the following:-

Name of the manufacturer  
Description of the material  
Length (m)  
Lot No.  
Contract No. & Consignee

**6. Storage**

- 6.1** The treated fabrics either in bail or roll forms shall be stored in their original packing avoiding superimposed heaps in case of bales in damp free condition and away from direct sunlight.

- 7.** “Firm should comply Make in India policy and Public Procurement (Preference to Make in India) order -2017 under this specification” and subsequent amendment done time to time.

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