

REVISION OF SPECIFICATION / STR

Ref: Current Spec. No.- C-8217 (Rev.2), Schedule of Requirements for Aluminium Chequered sheets for use as flooring material on coaching stock.

1. RDSO is reviewing the specification/STR to cater to the latest technological developments in the field, modify clauses not relevant in the present context and making them more enabling with focus on functional requirements.
2. It is requested that your comments / suggestions with regard to improvements / modifications in specification / STR of this item may be submitted in the following format along with the justification for the changes required.

Part A: Basic Information

SN	Particulars	Information
1	Name	
2	Designation	
3	Professional Qualification	
4	Organization / Firm's Name	
5	Address for Correspondence	
6	Contact No.	
7	Email ID	
8	<u>In case of Firm / Individual:</u> Manufacturing experience of item (or similar Item) on which comments are offered	
9	<u>Where relevant:</u> Whether any technical document to support suggested changes is available / enclosed for better appreciation	

Part B: Comments / suggestions on the specification

SN	Clause No. of RDSO STR / Spec	Clause, as exists in RDSO STR / Spec	Clause , as it should read after incorporation of comments / suggestions in the RDSO Spec / STR	Justification for changes


Comments may be sent to:

Director/CD/Carriage
Research Designs and Standards Organization
Manak Nagar, Lucknow – 226011

Email: edcar.rdso@gmail.com Or jdircd@gmail.com

INDIAN RAILWAYS

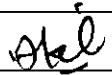
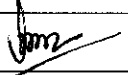



 Director/Standard/ Carriage
 Checked & Approved By:
 04/09/2013
 Per/STDS

SCHEDULE OF REQUIREMENTS FOR ALUMINIUM CHEQUERED SHEETS FOR USE AS FLOORING MATERIAL ON COACHING STOCK

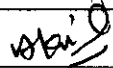
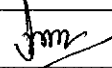
S. No.	Month/Year of issue	Revision / Amendment	Page No.	Reason for Amendment
1.	---	Nil	NA	1 st Issue
2.	December, 1997	Rev. 01	All	Technical changes
3.	September, 2013	Rev. 02	All	Technical changes

Issued By:
Research Designs and Standards Organization
Manak Nagar, Lucknow - 226011.

Signature		
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INDEX

S. No.	Description	Page No.
1.	Scope	3
2.	Service Conditions	3
3.	Governing Specifications	3
4.	Technical Requirements	3
5.	Marking	3
6.	Selection of Test Samples	3
7.	Mechanical Tests	4

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**SCHEDULE OF REQUIREMENTS FOR ALUMINIUM CHEQUERED SHEETS
FOR USE AS FLOORING MATERIAL ON COACHING STOCK**

1.0 SCOPE:

1.1 This schedule covers the requirements of aluminium chequered sheets to be used as flooring material in the coaches of Indian Railways.

2.0 SERVICE CONDITIONS:

2.1 The aluminium chequered sheets will be subjected to heavy wear, severe loading and adverse weather conditions.

3.0 GOVERNING SPECIFICATIONS:

3.1 The chequered sheets will confirm to IS designation 65032 aluminium alloy as specified in IS: 737-2008.

3.2 The temper of aluminium alloy 65032 shall confirm to designations T6 as defined in IS: 5052-1993.

3.3 Dimensional tolerances shall be governed by IS: 2676-1981.

4.0 TECHNICAL REQUIREMENTS:**4.1 General:**

4.1.1 The aluminium chequered sheet shall be chequered on the working surface and plain on the reverse surface.

4.1.2 The chemical composition of the material shall be as per IS: 737-2008, designation 65032.

4.1.3 The mechanical properties of the material shall be as per IS: 737-2008, designation 65032, condition T6.

4.2 Dimensions:

4.2.1 Minimum thickness of 2.0 mm (height of elevated ridges is not included) as given in IS: 14712-1999.

4.2.2 Height of elevated ridges 1.0 ± 0.4 mm as given in IS: 14712-1999.

4.2.3 Length and width shall be as per the requirements of the purchaser. Tolerance on these shall be as per clause 3.3.

4.3 Pattern:



The pattern of aluminium chequered sheet shall be of single bar, pattern (ii) as given in IS: 14712-1999 figure (1). However, if agreed to between the purchaser and the manufacturer/supplier other patterns as specified in IS: 14712-1999, figure (1) can also be supplied/used.

5.0 MARKING:

5.1 Each sheet shall be suitably marked for identification as agreed between the supplier and the purchaser with the name of the manufacturer, grade and condition of the material, and batch number.

6.0 SELECTION OF TEST SAMPLES:

6.1 The test sample shall be cut from a sheet selected from each heat treatment batch. Before the test samples are cut off, they shall be marked to identify them with heat treatment batch they represent.

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- 6.2 The test samples shall be tested in the condition as supplied. The test samples shall not be further heat treated or mechanically worked before they are tested.
- 6.3 When sheet is ordered to specified dimensions, the test samples shall be cut from the margins of the sheets before shearing to size and attached to the sheet from which they were cut before final heat treatment is carried out.

7.0 MECHANICAL TESTS:

- 7.1 The following tests shall be made on test pieces prepared from test samples selected as specified under clause 6.0.
- 7.2 Tensile test and proof test shall be carried out in accordance with IS: 1608-2005.
- 7.3 The bend test pieces shall be made 15 mm wide of convenient length and cut with their longer axis transverse to the direction of rolling for the sheet. The longer edges shall be carefully rounded and smoothed longitudinally, so that the cross-section of the test piece has approximately semi-circular ends.
- 7.3.1 The test piece shall not crack when bent through 180° round a former having radius as follows:-


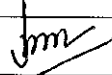
Condition

T6

Radius of Bend

3t, (t = thickness of material)

- 7.3.2 Bend test is a test of ductility and not necessarily a guide to the radius to which sheet may be formed.
- 7.4 Should any material fail in any one of the tests, two more samples shall be drawn and the tests repeated. If any of the two samples fail once again in the same test, the material shall be rejected.

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