TITLE : **ALUMINIUM ALLOY 64430 (HS30), SOLUTION HEAT TREATED AND PRECIPITATION TREATED (T6), TREAD SHEETS**

OLD NUMBER: MSA 2004

1. METHOD OF DESIGNATION

Quote short title, the thickness and the 12-digit part number consisting of the 7-digit standard number followed by the 5-digit number shown against the required size in Table-1.

Example:	**ALUMINIUM 64430 TREAD SHEET - 3**	**5161 013 274 74**

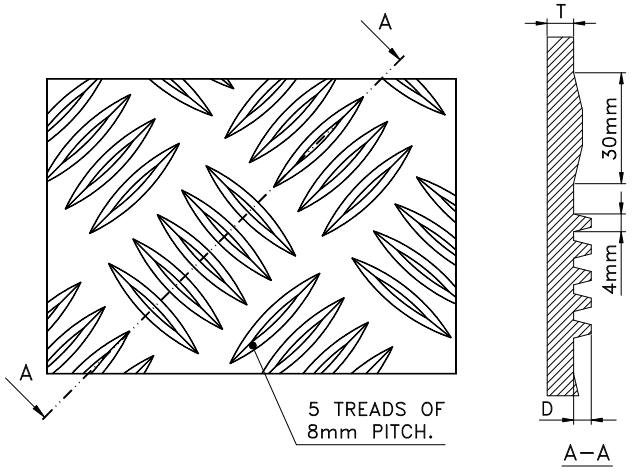

FIGURE-1

TABLE-1

Thickness T, mm	Depth of Tread (chequere) D, mm	Tolerance on		Mass (Nom.) kg/m^2	**Part Number 5161 013**
		T, ± mm	D, ± mm		
3	2	0.13	0.50	9.05	**274 74**
4	2			11.4	**284 44**
5	2			14.3	**300 93**
6	2			17.0	**310 63**

2. REQUIREMENTS

2.1 Aluminium alloy tread sheet (chequered sheet) ordered as per **5161 013** shall comply with the data given in this standard.

The changes in the standard are highlighted in Blue colour and vertical line on their right margin.

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2.2 **Governing Specification:** The material shall comply with the requirements of **IS:737-2008 Reaffirmed 2018, Alloy 64430 (HS 30) or Alloy 65032 (H20)** and shall be supplied in **solution heat treated and precipitation treated (WP**) or T6 condition.

2.3 The Tread Sheets shall be smooth on the underside and ribbed on the top with rolled in Five-Bar Patterns in relief as shown in Figure-1. The ribs are elongated and arranged diagonally in groups of Five. They shall protrude from the base with an offset by 90°.

2.4 The Tread Sheets shall be clean and free from harmful defects that are detrimental to its suitability and use.

2.5 The Tread Sheets shall be supplied in size of 813 x 2500 mm, unless otherwise stated in the order. The tolerance on the width and length shall be ± 3 mm and ± 4 mm respectively. The dimensions and tolerances shall be as per Table-1.

2.6 **PACKAGING, PACKING AND MARKING**

2.6.1 **Unit Packaging** - The sheets shall be supplied interleaved with Anti tarnish type neutral tissue paper. Unit packages not exceeding 25 sheets each with interleaving paper shall be securely wrapped round using polyethylene films and sealed to prevent moisture absorption, oxidation and tarnishing.

2.6.2 **Packing** - Unit packages of nett mass not exceeding 250 kg shall be packed in wooden cases in such a way as to have, no movement of the tread sheets inside the packing case, edge bending and corner damages. The cases shall be sealed with box strapping to avoid damage during transit.

2.6.3 **Marking** - The packing cases shall be marked with the name of the supplier, type reference, dimensions, description of the item, batch number, nett mass, part number and the purchase order reference.

2.7 The inspection and acceptance criteria of aluminium alloy tread sheets covered by this standard shall be as per **QS 1010**.

2.8 **Test Certificate** - The supplier shall provide a test certificate indicating physical, chemical and mechanical properties alongwith each consignment.

3. **APPLICATION**

Aluminium alloy tread sheets covered by this standard are more popularly known as chequered sheets. These sheets are intended to be used for flooring of shelters, Radar platforms etc. Plastic (sheet moulding compound - SMC) chequered sheets are covered by standard **5430 001**.

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4. TECHNICAL DATA

4.1 Chemical Composition, Percent based on IS:737-2018, alloy 64430

Aluminium	**..**	**Remainder**	Iron, max	..	0.60
Copper, max	..	0.10	**Manganese**	**..**	**0.4 - 1.0**
Magnesium	**..**	**0.4 - 1.2**	Zinc, max	..	0.10
Silicon	**..**	**0.6 - 1.3**	Chromium, max	..	0.25
Titanium and/or other Grain Refining Elements				..	0.20

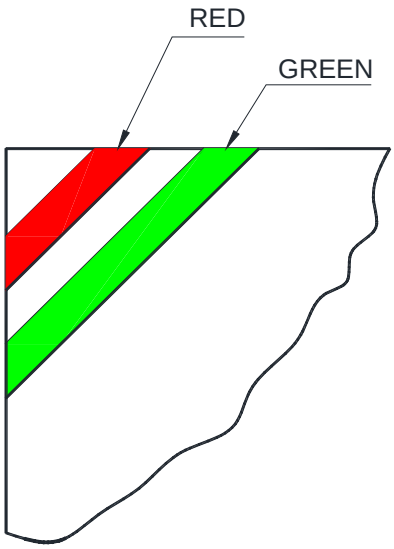
4.2 Mechanical Properties

Characteristics	Unit	Requirements	Test Methods
0.2% Proof Stress, min	MPa*	250	IS:1608-2017
Tensile Strength, min	MPa	295	
Elongation,** min	%	6	

*1 MPa = 1N/mm^2 = 0.102 kgf/mm^2 ** Gauge Length = 50 mm

5. IDENTIFICATION

After the material has passed the acceptance tests, it shall be marked with **RED-GREEN** colour bands by Bharat Electronics as per **DS 125.**



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