

BRITISH STANDARDS INSTITUTION

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BRITISH STANDARD FOR
AIRCRAFT MATERIAL

ALUMINIUM-MANGANESE ALLOY

SHEETS AND STRIPS

(One-quarter hard)

NOTE 1. Heating material to this specification (e.g. to facilitate bending or forming) may reduce its strength to that of the annealed condition, and may also increase the liability to coarse grain.

NOTE 2. Where metric equivalents are stated, the figures in British units are to be regarded as the standard. The metric conversions are approximate. More accurate conversions should be based on the tables in B.S. 350 'Conversion factors and tables'.

1. Inspection and testing procedure.

This British Standard shall be used in conjunction with Sections One and Eight of British Standard L.100.

2. Quality of material.

The material shall be made from aluminium complying with the requirements of British Standards L.31, L.48 or L.49, and manganese, with or without approved scrap, at the discretion of the manufacturer.

3. Chemical composition.

The chemical composition of the material shall be:

Element	Per cent	
	min.	max.
*Copper	—	0.10
*Magnesium	—	0.1
Silicon	—	0.6
Iron	—	0.7
Manganese	1.0	1.5
*Nickel	—	0.2
*Zinc	—	0.1
*Lead	—	0.05
*Tin	—	0.05
*Titanium	—	0.15
*Chromium	—	0.05
Aluminium	—	The remainder

*Subject to the discretion of the Inspecting Authority, determination of these elements need be made on a small proportion only of the samples analysed.

2 L. 60, January, 1961

(Replacing British Standard L. 60)

4. Condition.

The material shall be supplied cold-rolled, or cold-rolled and partially annealed.

5. Heat treatment.

None.

6. Mechanical properties. (See Note 1.)

6.1 Tensile test.

The mechanical properties obtained from test pieces selected and prepared in accordance with the relevant requirements of British Standard L.100 shall be as follows:

Tensile strength		Elongation Material thicker than 0.104 in (12 S.W.G.) only
min.	max.	per cent
7.5 ton/sq in (11.8 kg/mm ²)	9.5 ton/sq in (15.0 kg/mm ²)	Not less than 12

6.2 Single bend test—material 0.104 in (12 S.W.G.) and thinner only.

Angle of bend 180°.

Radius of former Closed flat.

7. Tolerances on thickness.

For sheets the tolerances stated in Table 8 of British Standard L.100 and for strips in coil those stated in Table 10 of British Standard L.100 shall apply.

This British Standard, having been approved by the Aircraft Industry Standards Committee and endorsed by the Chairman of the Engineering Divisional Council, was published under the authority of the General Council of the Institution on 31st January, 1961.

The Institution desires to call attention to the fact that this British Standard does not purport to include all the necessary provisions of a contract.

British Standards are revised, when necessary, by the issue either of amendment slips or of revised editions. It is important that users of British Standards should ascertain that they are in possession of the latest amendments or editions.

The following B.S.I. references relate to the work on this standard:
Committee reference ACE/24. Draft for comment A (ACE) 1839.