

**Ministry of Defence
Defence Procurement Agency, ADRP2
Abbey Wood
Bristol
BS34 8JH**

OBSOLESCENCE NOTICE

All DTD specifications were declared obsolescent from 1st April 1999. All DTD 900 series approvals also lapsed at that time. The standards will no longer be updated but will be retained as obsolescent documents to provide for the servicing of existing equipment.

Further Guidance

The aim in declaring the specifications obsolescent is to recognise that the documents are not being updated and thus should be used with care by both purchaser and supplier. For example, a specification could contain valid technical information but may also contain type approval clauses that contradict procurement policy and/or use materials that do not comply with environmental legislation. The obsolescent specification can still be used as a basis for a purchase provided that the supplier and purchaser agree suitable changes to the specification within the purchase order/contract.

For the DTD 900 system, each specification has provided an MoD approved material and process. For these items, the declaration of obsolescence will constitute the termination of both the extant MoD approval and the continuing MoD assessment that had underpinned those approvals. Again, the technical content of the document remains valid and can be used by both purchaser and supplier as a basis for a contract but an acceptable (to the parties) approval/assessment procedure would be required.

Aerospace Material Specification
ALUMINIUM-COATED PLATE
OF ALUMINIUM - COPPER - MAGNESIUM - MANGANESE ALLOY
 (Solution treated, controlled stretched and aged at room temperature)
 (Cu 4.4, Mg 1.5, Mn 0.6)

NOTE. This specification is one of a series issued by the Ministry of Defence (Aviation Supply) to meet a requirement not covered by an existing British Standard for aerospace material.

1. INSPECTION AND TESTING PROCEDURE

This specification shall be used in conjunction with Sections 1 and 14 of British Standard L.100.

2. QUALITY OF MATERIAL

2.1 The plate shall consist of a core of the alloy specified in 3.1 coated uniformly on both sides with aluminium of the chemical composition specified in 3.2. The minimum average thickness of the cladding on each side shall be 2 %.

2.2 The core material shall be made from aluminium and alloying constituents, with or without approved scrap, at the discretion of the manufacturer.

3. CHEMICAL COMPOSITION

3.1 Core. The chemical composition of the core material shall be:

Element	Per cent	
	min	max
Copper	3.8	4.9
Magnesium	1.2	1.8
Silicon	—	0.50
Iron	—	0.50
Manganese	0.30	0.9
*Nickel	—	0.05
*Zinc	—	0.2
*Lead	—	0.05
*Tin	—	0.05
*Titanium plus Zirconium	—	0.20
*Chromium	—	0.10
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.

3.2 Cladding. The chemical composition of the cladding material shall be:

Element	Per cent	
	min	max
**Aluminium	99.7	—
Copper	—	0.02
Silicon	—	0.15
Iron	—	0.20
Zinc	—	0.03

** To be determined by difference

4. CONDITION

The material shall be supplied solution treated, controlled stretched to a permanent extension of not less than 1½% nor more than 2½%, and aged at room temperature. No other condition of supply is permissible.

5. HEAT TREATMENT

The material shall be heat treated as follows:

- (1) Solution treat by heating at a temperature of $495 \pm 5^\circ\text{C}$ and quenching in water at a temperature not exceeding 40°C .
- (2) Age at room temperature for not less than 48 hours.

6. MECHANICAL PROPERTIES

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 not less than the following values:

Nominal thickness		0.2% proof stress	Tensile strength	Elongation on gauge length of	
				50 mm	$5.65 \sqrt{S_0}$
mm		N/mm ²	N/mm ²	%	%
Over 6	Up to and including 12.5 25	260	410	10	—
12.5		280	430	—	8

NOTE. $1 \text{ N/mm}^2 = 0.102 \text{ kgf/mm}^2 = 0.1 \text{ hbar} = 0.065 \text{ tonf/in}^2$. Information on SI units is given in BS 350, 'Conversion factors and tables', and in PD 5686, 'The use of SI units'.

Approved for issue,

E. W. RUSSELL,

Director/Materials.

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