

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

## **OBSOLESCENCE NOTICE**

All DTD specifications were declared obsolescent from 1<sup>st</sup> 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-ALLOY-COATED PLATE**  
**OF ALUMINIUM-ZINC-MAGNESIUM-COPPER-CHROMIUM ALLOY**  
**(Solution treated, controlled stretched and precipitation treated)**  
**(Zn 5.8, Mg 2.5, Cu 1.6, Cr 0.15)**

*NOTE. This specification is one of a series issued by the Procurement Executive, Ministry of Defence 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 alloy 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
<b>Copper</b> .....	<b>1.2</b>	<b>2.0</b>
<b>Magnesium</b> .....	<b>2.1</b>	<b>2.9</b>
Silicon .....	—	0.40
Iron .....	—	0.50
Manganese .....	—	0.30
*Nickel .....	—	0.05
<b>Zinc</b> .....	<b>5.1</b>	<b>6.4</b>
*Lead .....	—	0.05
*Tin .....	—	0.05
*Titanium plus Zirconium .....	—	0.20
<b>Chromium</b> .....	<b>0.10</b>	<b>0.25</b>
<b>Aluminium</b> .....	<b>The remainder</b>	

\*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
Copper .....	—	0.02
Silicon .....	—	0.15
Iron .....	—	0.20
<b>Zinc</b> .....	<b>0.8</b>	<b>1.2</b>
<b>Aluminium</b> .....	<b>The remainder</b>	

#### 4. CONDITION

4.1 Except as provided in 4.2 the material shall be supplied solution treated, controlled stretched to a permanent extension of not less than 1½% nor more than 2½% and precipitation treated.

4.2 If agreed between the manufacturer and the purchaser and stated on the order, the material shall be supplied solution treated and controlled stretched to a permanent extension of not less than 1½% nor more than 2½%. No other alternative 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 460±10°C and quenching in water at a temperature not exceeding 40°C.
- (2) Precipitation treat by heating at a temperature of 135+5°C for not less than 12 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 $\bar{0}S_0$
mm	N/mm <sup>2</sup>	N/mm <sup>2</sup>	%	%
Over 6 12.5	420 450	480 530	7 —	— <b>6</b>
Up to and including 12.5 25				

*NOTE.* 1 N/mm<sup>2</sup> = 0.102 kgf/mm<sup>2</sup> = 0.1 hbar = 0.065 tonf/in<sup>2</sup>. Information on SI units is given in BS 350, 'Conversion factors and tables', and in PD 5686, 'The use of SI units'.

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Approved for issue,

E. W. RUSSELL,

Director/Materials.

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