

**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**  
**PLATE OF MAGNESIUM-3% ZINC-ZIRCONIUM ALLOY**  
**(Zn 3.0, Zr 0.6)**

*NOTE 1. 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.*

*NOTE 2. Only simple bending or shaping operations can be made on this material without heating. Most forming operations can be successfully carried out at a temperature of approximately 300°C, in heating to which temperature a loss in tensile properties of the material up to about 10% must be expected. This material must not be heated above 400°C, since this would result in losses in tensile properties greater than 10%.*

**1. INSPECTION AND TESTING PROCEDURE**

This specification shall be used in conjunction with Sections 1 and 7 of British Standard L.500.

**2. QUALITY OF MATERIAL**

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

**3. CHEMICAL COMPOSITION**

The chemical composition of the cast slabs used for making the material shall be:

Element	Per cent	
	min.	max.
<b>Zinc</b> .....	<b>2.5</b>	<b>4.0</b>
<b>Zirconium</b> .....	<b>0.4</b>	<b>0.8</b>
*Manganese .....	—	0.15
*Copper .....	—	0.03
*Aluminium .....	—	0.02
*Silicon .....	—	0.01
*Iron .....	—	0.01
*Nickel .....	—	0.005
<b>Magnesium</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.

**4. CONDITION**

The material shall be supplied as rolled or as rolled and flattened.

**5. HEAT TREATMENT**

None.

## 6. MECHANICAL PROPERTIES

6.1 **Tensile test.** The mechanical properties obtained from test pieces selected and prepared in accordance with the relevant requirements of British Standard L.500 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		MPa	MPa	%	%
Over	Up to and including				
6	12.5	175	260	10	-
12.5	25	175	260	-	8
25	50	160	250	-	8

*NOTE.* Conversion factors :  $1\text{MPa} = 1\text{N}/\text{mm}^2 = 0.102\text{ kgf}/\text{mm}^2 = 0.065\text{ tonf}/\text{in}^2$ . Information on SI units is given in BS 3763 'The International System of units (SI);' see also BS 350 'Conversion factors and tables.'

6.2 For plate thicker than 50 mm the mechanical properties shall be as agreed between the manufacturer and the purchaser.

Approved for issue,

E. W. RUSSELL,

Director of Research Materials 2.

© Crown copyright 1973

Printed in England by Willsons Printers (Leicester) Ltd.  
and published by Her Majesty's Stationery Office

5p net

Dd. 503685 K11 7/73 WPL455

SBN 11 470730 8