

TA. 6, April, 1968

UDC 629.7:669.295-41

(Superseding D.T.D. 5063 and D.T.D. 5193)

**BRITISH STANDARDS INSTITUTION**

BRITISH STANDARDS HOUSE, 2 PARK STREET, LONDON, W.1

INCORPORATED BY ROYAL CHARTER

Telephone: 01-629 9000

Telegrams: STANDARDS LONDON W1

BRITISH STANDARD: AEROSPACE SERIES  
SPECIFICATION FOR  
COMMERCIALLY PURE TITANIUM  
SHEETS AND STRIPS  
(Tensile strength 37-47 tonf/in<sup>2</sup>)  
(Suitable for welding)

NOTE 1. Other forms of this material of the same tensile strength are covered by the following British Standards:

TA.7. Bars for machining.

TA.8. Forging stock.

TA.9. Forgings.

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

**1. INSPECTION AND TESTING PROCEDURE**

This British Standard shall be used in conjunction with Sections 1 and 5 of British Standard TA.100.

**2. MANUFACTURE**

The material shall be made from ingots produced, by consumable electrode melting, from materials having a total carbon content of not more than 0.08%.

**3. CHEMICAL COMPOSITION**

The chemical composition of the material shall be:

Element	Per cent	
	min.	max.
Iron	-	0.20
Hydrogen	-	0.0125
Titanium	-	The remainder



**4. CONDITION**

The material shall be supplied annealed and subsequently descaled, or bright annealed.

**5. HEAT TREATMENT**

The material shall be annealed by heating uniformly at a temperature of  $675 \pm 25^\circ\text{C}$ .

Price 3/- net

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 TA.100 shall be:

0.2% proof stress Sheets 0.0148 in (0.38 mm) thick and thicker only*.		Tensile strength				Elongation on 2 in gauge length Material 0.036 in (0.91 mm) thick and thicker only.
tonf/in <sup>2</sup>	hbar	tonf/in <sup>2</sup>	hbar	tonf/in <sup>2</sup>	hbar	%
30.0	46	37.0	57	47.0	73	15

\*The value for similar strip in coil is expected to be not less than 25.0 tonf/in<sup>2</sup> (39 hbar).  
NOTE. 1 hbar = 10<sup>7</sup> N/m<sup>2</sup>.

6.2 Single bend test

Nominal thickness	Angle of bend	Radius of former
Up to and including 0.072 in (1.83 mm)	180°	nominal thickness x 2½
Over 0.072 in up to and including 0.128 in (3.25 mm)	180°	3

This British Standard, having been approved by the Aerospace 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 17th April, 1968.

The Institution desires to call attention to the fact that this British Standard does not purport to comprise 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 BSI references relate to the work on this standard:  
Committee reference ACE/49      Draft for comment 66/24956

SBN: 580 00180 6