

ALUMINIUM PLATE

TYPICAL APPLICATIONS

Aerospace & Defence Components
High Technology Applications

PRODUCT DESCRIPTION

A strong 3.9 to 5.0% Copper alloy, rolled plate specification. Solution treated, artificially aged and stress relieved (control stretched) to achieve the T651 condition.

General Engineering Equivalent - 2014AT651
General Engineering Euronorm - EN 485/515/573
Old BS Spec - HP15TF (BS1470)
AECMA Euronorm - None

STOCK RANGE

1/4" to 4" Thick (6.35 to 101.6mm)

CUT TO SIZE SAWN BLANKS

Cut to length in house to tolerances - Nil + 1.6mm

MACHINABILITY

Good.

CORROSION RESISTANCE

Resistance to Atmospheric Attack
Poor.

SURFACE TREATMENT

Anodising

Protective - Fair
Bright - Unsuitable
Hard - Good
Colour - Fair (Dark Colour Only)

Plating

Very Good

Vitreous Enamelling

Unsuitable

WELDABILITY

Brazing & Soldering - Not Recommended
Oxygen - Not Recommended
Inert Gas - Not Recommended
Resistance, Spot, Beam - Excellent

PRODUCTION TOLERANCES

Manufacturing limits are as stated in the Section 14 of BS 4L100 – Tables (F1, 2, 5, 7 & 8). For further assistance please contact our Sales Dept / Laboratory.

CHEMICAL COMPOSITION (WEIGHT %)

	Al	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti + Zr	Pb	Sn
Min	Rem	0.50		3.9	0.40	0.20						
Max	Rem	0.90	0.50	5.0	1.2	0.80	0.10	0.20	0.20	0.2	0.05	0.05

MECHANICAL PROPERTIES (MINIMA FOR T651 CONDITION)

Direction of Test Sample	Thickness Range (mm)		0.2% Proof Stress (MPa)	Tensile Strength (MPa)	Elongation On 50mm (%)	Elongation On $5.65\sqrt{S_0}$ (%)
	Over	Up to & Including				
Long Transverse	6	12.5	410	460	7	-
	12.5	25	410	460	-	6
	25	40	400	450	-	5
	40	63	390	430	-	5
	63	90	390	430	-	4
	90	115	370	420	-	4
Short Transverse	115	140	350	410	-	4
	25	90	360	420	-	2.5
	90	115	340	410	-	2.5
Longitudinal	115	140	340	400	-	2.5
	25	40	410	450	-	6
	40	90	400	430	-	6
Longitudinal	90	115	380	430	-	6
	115	140	360	420	-	6

TECHNICAL SALES ASSISTANCE

Our resident team of qualified metallurgists and engineers will be pleased to assist further on any technical topic.

Smiths High Performance

Unit O, Stratton Business Park, London Road, Biggleswade, Bedfordshire SG18 8QB United Kingdom

Tel: +44 (0) 1767 604 708

Fax: +44 (0) 01767 312 885

Email: sales@smithshp.com

Website: www.smithshp.com

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