

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

Production Tolerances

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

Cut Size to Sawn Blanks

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

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

Machinability

Good.

Corrosion Resistance

Resistance to Atmospheric Attack - Poor

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 and inc.				
Long Traverse	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 Traverse	115	140	350	410	-	4
	25	90	360	420	-	2.5
	90	115	340	410	-	2.5
	115	140	340	400	-	2.5
Longitudinal	25	40	410	450	-	6
	40	90	400	430	-	6
	90	115	380	430	-	6
	115	140	360	420	-	6

UK Service Centres:

Smiths Belfast	02895 908 897
Smiths Biggleswade	01767 604 704
Smiths Birmingham	0121 728 4940
Smiths Bristol	0117 971 2800
Smiths Chelmsford	01245 466 664
Smiths Gateshead	0191 469 5428
Smiths Horsham	01403 261 981

Smiths Leeds	0113 307 5167
Smiths Manchester	0161 794 8650
Smiths Norwich	01603 789 878
Smiths Nottingham	0115 925 4801
Smiths Redruth	01209 315 512
Smiths Verwood	01202 824 347
Main Office	0845 527 3331

Quality & Testing:



www.smithmetal.com info@smithmetal.com