

## ALUMINIUM EXTRUSION

### TYPICAL APPLICATIONS

Aerospace & Defence Components  
High Technology Applications

### PRODUCT DESCRIPTION

A high strength 4 to 5 % Copper alloy, produced in extruded bar and profile form, in the fully heat-treated condition (solution heat-treated and artificially aged). Normally stocked in the T6511 condition (stress relieved by controlled stretching), except sizes under 10mm diameter and over 203.2mm diameter. (T6 only). Over 203.2mm diameter can be made to chemical composition only.

General Engineering Equivalent - 2014AT6  
General Engineering Euronorm - EN 573 / 755  
Old BS - HE15TF (BS1474)  
AECMA Euronorm - BS EN 2384, 2635

### STOCK RANGE

**Round Bar** : 1/8" Diameter up to 12" Diameter  
3.175 to 304.8mm

**Flat & Squares** : 1/2" X 1/4" up to 8" X 6"  
12.7 X 6.35 mm to  
203.2 X 152.4mm

### CUT TO SIZE SAWN BLANKS

Cut to length in house to tolerances - Nil + 1.0mm

### MACHINABILITY

Very good.

### CORROSION RESISTANCE

#### Resistance to Atmospheric Attack

Poor, especially when exposed to water or salt environments. To protect against atmospheric corrosion in storage, lightly coat with Lanolin based protective oil. For further information, contact our Sales Dept / Lab.

### 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 5 of BS 4L100 – Tables (C1, 2, 3, 4, 5, 6, 7 & 8). For further assistance please contact our Sales Dept / Laboratory.

### CHEMICAL COMPOSITION (WEIGHT %)

	Al	Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Ti + Zr	Others each
Min	REM	0.50		3.90	0.40	0.20					
Max	REM	0.90	0.50	5.00	1.20	0.80	0.25	0.15	0.10	0.20	0.15

### MECHANICAL PROPERTIES (MINIMA FOR T6511 UNLESS STATED)

Size Range(mm)		Tensile Strength	0.2% Proof Stress	Elongation on	Elongation on
Over	Up to & Including	(MPa)	(MPa)	5.65 √ S <sub>0</sub> (%)	50mm (%)
-	2.5 (T6)	415	370	-	6
2.5	10 (T6510)	435	385	-	6
10	25	460	415	7	-
25	75	490	440	7	-
75	100	480	435	7	-
100	150	465	420	7	-
150	200	435	390	7	-

### TECHNICAL SALES ASSISTANCE

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

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