

### 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  
 BS / EN Euronorm - EN 573 / 755  
 Old BS - HE15TF (BS1474)  
 AECMA Euronorm - BS EN 2384, 2635

#### Production Tolerances

Manufacturing limits are as stated in BS L100. For further assistance please contact our Sales Dept / Laboratory.

#### Cut Size to Sawn Blanks

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

#### 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

#### 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.

#### Machinability

Very Good

#### Chemical Composition (weight %)

	Al	Si	Fe	Cu	Mn	Mg	Zn	Ti	Ni	Ti+Zr	Others (ea)
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 (MPa)	0.2% Proof Stress (MPa)	Elongation on 5.65√S <sup>0</sup> (%)	Elongation on 50mm (%)
- to 2.5 (T6)	415	370	-	6
2.5 to 10 (T6510)	435	385	-	6
10 to 25	460	415	7	-
25 to 75	490	440	7	-
75 to 100	480	435	7	-
100 to 150	465	420	7	-
150 to 200	435	390	7	-

#### 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**  
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#### Quality & Testing:



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