

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 ₀ (%)	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.

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

All information in this data sheet is based on approximate testing and is stated to the best of our knowledge and belief. It is presented apart from contractual obligations and does not constitute any guarantee of properties or of processing or application possibilities in individual cases. Our warranties and liabilities are stated exclusively in our terms of trading. © Smiths Metal Centres Ltd 2007