

# 2618A Aluminium Bar

Smiths Advanced Metals

Rev: SAM/datasheets/aluminium/2618a-bar/feb-2022

Page: 1 of 1

## For High-Temperature Service

2618A aluminium (DTD5014) is a popular engineering material.

Although originally designed for aerospace applications, it is also now the leading material for racing piston production and widely used for a variety of high-temperature service applications.

This is because of its versatility and machinability. It is a copper and magnesium aluminium alloy that is fairly corrosion resistant in atmospheric conditions. This makes it ideal for producing components that are exposed to elevated temperatures. It maintains its mechanical strength at temperatures up to 200°C with deployment up to a maximum of 300°C. We have available [2618A aluminium bars](#) in a wide range of sizes.

### Grades / Specifications

- AIR 9049
- AMS4132
- BS L100
- DTD 5014
- EN3553
- NFA 50-702
- BS EN 573, BS EN 755
- BS EN 754

### Cut to bespoke shape service:

We offer comprehensive billeting services using a range of equipment. Our products are cut to tight tolerances to match our clients' needs, which often negates the need for further cutting operations.

Our team of qualified metallurgists and engineers will also be pleased to assist you further and provide comprehensive technical and sales support.



### Key Applications

- Racing engine components
- Chassis components
- Aerospace components
- Defence components

### Benefits

- Excellent overall strength
- Superior strength at elevated temperature
- Good machinability
- Resistance to atmospheric attack
- T6 condition/T6511 temper
- Versatility

### Chemical Composition (weight %)

	Si	Fe	Cu	Mn	Mg	Ni	Zn	Ti	Zr+Ti	Others (ea)	Others (total)	Al
min.	0.15	0.90	1.80		1.20	0.80						Rem
max.	0.25	1.40	2.70	0.25	1.80	1.40	0.15	0.20	0.25	0.05	0.15	

### Mechanical Properties (minimum values unless stated)

Temper	MPa R <sub>m</sub>	MPa R <sub>p0.2</sub>	Elongation A (%)	Hardness HBW Typical
10mm diameter or greater				
T6, T6511	410	330	6	140
From 10mm diameter to 100mm max				
T6, T6511	420	360	7	145

Properties as per BS EN 755-2

### Physical Properties

Temper	T6
Density (g/cm <sup>3</sup> )	2.75
Melting Range (°C)	560-650
Electrical Conductivity (20°C, % IACS)	39.2
Thermal Conductivity (% IACS)	38.4
Modulus of Elasticity (x10 <sup>3</sup> , N/mm <sup>2</sup> )	72

[www.smithsadvanced.com](http://www.smithsadvanced.com)

[info@smithsadvanced.com](mailto:info@smithsadvanced.com)



Stratton Business Park,  
London Road, Biggleswade,  
Bedfordshire SG18 8QB

Tel: +44 (0) 1767 604710

