

# 6061 Aluminium Bar

Smiths Advanced Metals

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## Medium Strength Aluminium

Lightweight with impressive performance.

6061 aluminium alloy is a versatile product and one of the most popular heat-treatable alloys.

Combining medium strength with good corrosion resistance, workability and hardness, the material utilises elements including magnesium and silicon to achieve these characteristics. 6061 is also easily welded and formed and will operate impressively in elevated temperatures. The versatility of the alloy lends itself to widespread use throughout industry from aircraft structures to truck bodies and machined parts. We also process these aluminium bars for you in-house.

Smiths Advanced Metals stocks 6061 bars in various shapes, sizes and tempers (including 0, T4, T6, T651, T6511 tempers).



### Grades / Specifications

- AIR9049
- AMS4115
- AMS4116
- AMS4117
- AMS4150
- AMSQQA200/8
- AMSQQA225/8
- ASNA3277
- ASTM B221
- BS EN 573, BS EN 755, BS EN 754

### Key Applications

- Rail coaches
- Aircraft structures
- Shipbuilding

### Cut to bespoke shape service:

We offer a complete bar/rod cutting service using a range of in-house processing equipment. We process your bars to tight tolerances to match your requirement. Often, this added value service negates the need for further cutting, which will ultimately save you time and money.

We supply aluminium bars which are closer to your finished requirements.

### Benefits

- Good corrosion resistance
- Very good machinability
- Good weldability

### Chemical Composition (weight %)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others (ea)	Others (total)	Al
min.	0.40		0.15		0.80	0.04					Rem
max.	0.80	0.70	0.40	0.15	1.20	0.35	0.25	0.15	0.05	0.15	

### Mechanical Properties (min. values, ≤ 200 mm diameter bar)

Temper	MPa R <sub>m</sub>	MPa R <sub>p0.2</sub>	Elongation A (%)	Hardness HBW Typical
T4	180	110	15	65
T6	260	240	8	95

Properties as per BS EN 755-2

### Physical Properties

Temper	T4	T6
Density g/cm <sup>3</sup>	2.70	2.70
Melting Range °C	580 - 650	580 - 650
Thermal Conductivity (% IACS)	39.6	39.6
Electrical Conductivity (% IACS)	43	40
Modulus of Elasticity x10 <sup>3</sup> N/mm <sup>2</sup>	70	70

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