

6082 Aluminium Bar

Smiths Advanced Metals

Rev: SAM/datasheets/aluminium/6082-bar/feb-2022

Page: 1 of 1

Structural Aluminium Alloy

The highest strength of 6000 series alloys

Known as a structural alloy, 6082 aluminium represents the highest strength 6000 series alloy currently available.

The material possesses medium strength with good corrosion resistance, workability and anodising properties. This strength is achieved by the inclusion of manganese in the alloying process, which affords greater control of the grain structure. Weldability is good, but overall strength around the welding zone is reduced.

Machinability is particularly good in T6 and T651 tempers, producing tight swarf coils when a chip breaker is in use.

Smiths Advanced Metals stocks [6082 aluminium bars](#) in a variety of shapes, sizes and tempers (including T4, T6, T6510 and T6511 tempers).



Grades / Specifications

- BS L100
- BS L111
- DTD 936
- H30TF
- BS EN 573, BS EN 755, BS EN 754

Key Applications

- Structural applications
- Cranes
- Highly stressed components

In-house Processing & Testing

Our [billeting services](#) are provided in-house where we process your aluminium bars to precise lengths in accordance with your requirements. We also provide comprehensive metallurgical support courtesy of our [UKAS Accredited Testing Laboratory](#).

Benefits

- Excellent corrosion resistance
- Good machinability
- Good weldability
- The highest strength of all the 6xxx series

Chemical Composition (weight %)

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Others (ea)	Others (total)	Al
min.	0.70			0.40	0.60						Rem
max.	1.30	0.50	0.10	1.00	1.20	0.25	0.20	0.10	0.05	0.15	

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

Temper	MPa R _m	MPa R _{p0.2}	Elongation A (%)	Hardness HBW Typical
T4	205	110	14	70
T6	270	200	6	95

Properties as per BS EN 755-2

Physical Properties

Temper	T4	T6
Density g/cm ³	2.70	2.70
Melting Range °C	575 - 650	575 - 650
Thermal Conductivity (% IACS)	43.7	43.7
Electrical Conductivity (% IACS)	42	44
Modulus of Elasticity x10 ³ N/mm ²	70	70

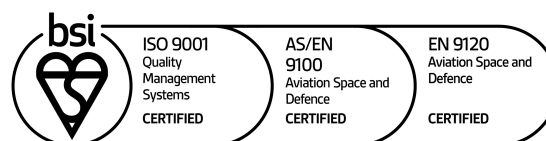
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