

6082 Aluminium Tube

Smiths Advanced Metals

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

Page: 1 of 1

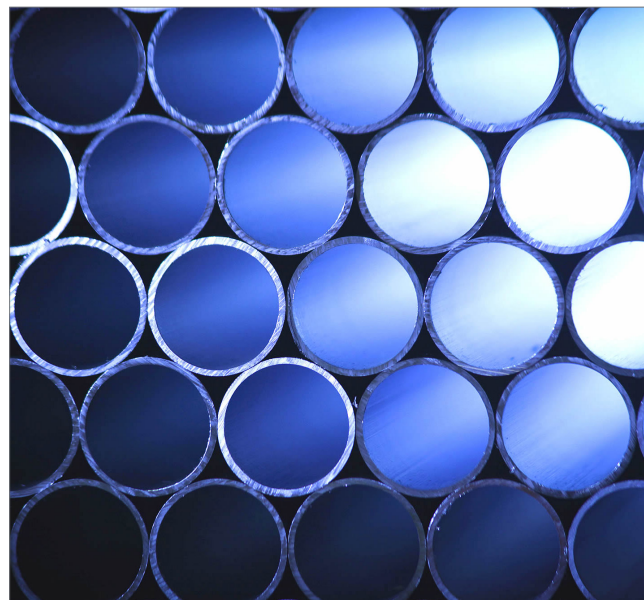
Medium Strength Aluminium Tube

6082 is a medium strength alloy

Regarded as a structural alloy, 6082 aluminium tube find everyday use in machining and is the highest strength 6xxx series alloy available.

The material offers medium strength, which is achieved by adding significant amounts of manganese into the alloying process, which controls the grain structure. In aluminium terms, 6082 is a relatively new product that has replaced 6061 in many applications. The alloy offers excellent corrosion resistance and good anodising properties. Workability is also good in the annealed condition. 6082 is a versatile alloy and our tubing find use throughout industry in various applications.

We stock [6082 aluminium tubes](#) in a wide range of sizes and tempers, including T4, T6 and O tempers.



Grades / Specifications

- BS L100
- BS L114
- BS1474
- BS EN 573, BS EN 755, BS EN 754

Key Applications

- High technology applications
- Military components
- Transport applications
- Highly stressed applications

In-house Processing & Testing

We offer in-house processing services with a dedicated tube cutting service to process your material to specific lengths. We also provide comprehensive metallurgical support courtesy of our [UKAS Accredited Testing Laboratory](#).

Benefits

- Very good weldability
- Good formability
- Excellent corrosion resistance
- Highest strength 6xxx alloy

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. unless stated, ≤ 20 mm thick wall)

Temper	MPa R _m	MPa R _{p0.2}	Elongation A (%)	Hardness HBW Typical
O	160 max	110 max	15	35
T4	205	110	14	70
*T6	310	240	10	95

* based on wall thickness from 5mm to 20mm

Properties as per BS EN 754-2

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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