6061 Aluminium

Smiths High Performance

Great Versatility

6061 aluminium alloy is a highly versatile engineering material used in various commercial applications.

The alloy originates from the US and has extensive use in producing heavy structures.

6061 aluminium offers medium to high strength with good corrosion resistance, particularly in atmospheric conditions at typical temperatures. Including copper in the alloying mix creates a less corrosion-resistant alloy than other commercial aluminium grades, but such differences are slight. With excellent weldability and formability coupled with medium fatigue strength, 6061 gives engineers numerous options.

The scope of usage ranges from architectural and decorative applications to aerospace and motorsport engineering due to the alloy's versatility and popularity.

In motorsport, the alloy is popular due to the material's weldability and moderate strength, while being easily formed when in the annealed condition.

Applications:

- Intake manifolds
- Hose fittings for coolers and pumps
- Oil reservoirs
- Race car pedals
- Engine blocks

Benefits:

- Highly versatile
- Medium to high strength
- Excellent weldability and formability
- Resistant to atmospheric corrosion
- Cost effective

About Smiths High Performance

Smiths High Performance is a leading stockholder and supplier of high-performance engineering materials. We are material supply chain partners supporting **high-technology market sectors**.

SCAN ME

Further technical data available on the reverse of this Datasheet

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* Chemical Composition (weight, %)

	Mn	Fe	Mg	Si	Cu	Zn	Ti	Cr	Al
Min:			0.80	0.40	0.15			0.04	Bal
Max:	0.15	0.70	1.20	0.80	0.40	0.25	0.15	0.35	Bal

* Properties as per BS EN 573-3

* Mechanical Properties

Tensile Strength	290 MPa min
Proof Stress	240 MPa min
Elongation A50 mm	8% min.
Brinell Hardness	88 HBW (typical)

Physical Properties

Density	2.70 g/cm^3
Melting Point	650°C
Thermal Expansion	23.4 x10^{-6} /K
Modulus of Elasticity	70 GPa
Thermal Conductivity	166 W/m.K

* Properties as per BS EN 485-2, T651 (12.5-40mm thickness range

...where performance matters...

When you purchase high-performance materials from **Smiths High Performance**, you will join some of the biggest and best global engineering companies. We are a Tier 1 supply chain partner to the world's leading motorsport companies. Our unique business structure and ethos allow us to offer services otherwise unavailable in this market sector.

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