6082 Aluminium

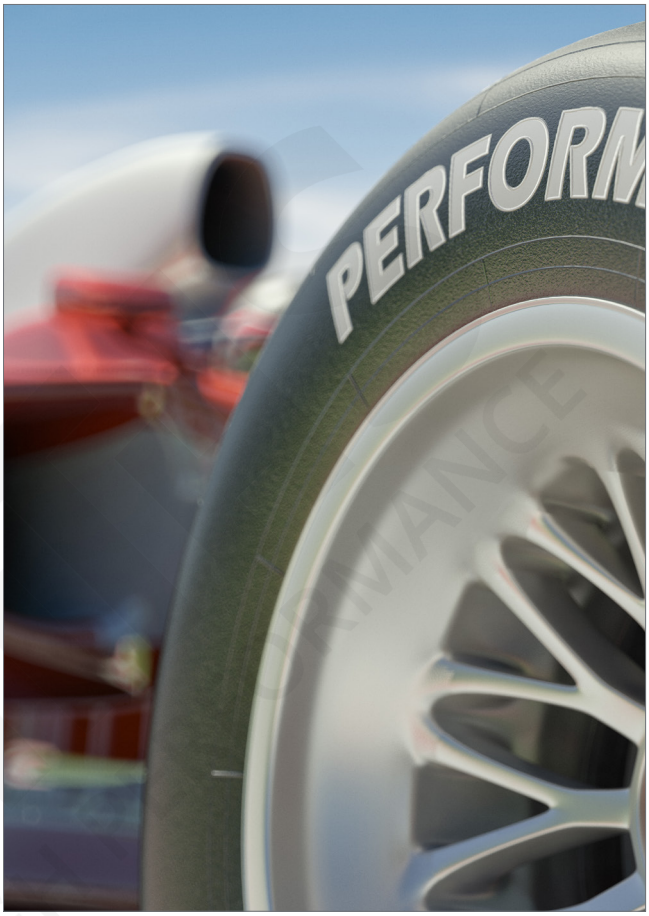
Smiths High Performance

For structural applications

6082 aluminium is the strongest of all 6xxx series aluminium alloys.

The alloy finds typical use in highly stressed applications and benefits from medium strength and excellent corrosion resistance.

The highly versatile aluminium alloy reaches its full potential as an engineering raw material after heat treatment, which involves solution annealing and subsequent artificial ageing. Apart from being highly resistant to atmospheric corrosion, 6082 offers good machinability and is easy to form and weld. The product has replaced 6061 aluminium in many engineering applications.



Use in motorsport:

While 6082 finds extensive use in commercial engineering applications, the alloy also offers broad suitability for use in the motorsport sector. Typical application examples include engine mounts, control arms, battery pack trays, suspension components and racing wheels.

As a structural alloy, 6082 aluminium is highly machinable in plate form, although the alloy is not suitable for producing complex profiles.

Product Benefits:

- Strongest 6xxx series aluminium
- Excellent corrosion resistance
- Good machinability
- Easy to form and weld
- For structural applications

Applications:

- Racing wheels
- Control arms
- Battery pack trays
- Engine mounts
- Suspension components

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:	0.40		0.60	0.70					Bal
Max:	1.00	0.50	1.20	1.30	0.10	0.20	0.10	0.25	Bal

* Properties as per BS EN 573-3

* Mechanical Properties

Tensile Strength	310 MPa min
Proof Stress	260 MPa min
Elongation A50 mm	8% min.
Brinell Hardness	95 HBW (typical)

Physical Properties

Density	2.70 g/cm^3
Melting Point	555°C
Thermal Expansion	24 x10^{-6} /K
Modulus of Elasticity	70 GPa
Thermal Conductivity	180 W/m.K

* Properties as per BS EN 755-2, T6 (20-150mm)

...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.

Unit 3, Juno Place
Stratton Business Park
Biggleswade SG18 8XP
Tel: +44 (0)1767 604 708