

7068 Aluminium

Smiths High Performance



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High Strength Aluminium Alloy

Alloy 7068 offers the highest mechanical strength of all aluminium alloys.

7068 aluminium combines a yield strength of up to 700 MPa (up to 30% greater than that of 7075 alloy) and good ductility with corrosion resistance similar to 7075 and other features beneficial to high-performance component/equipment designers.

Alloy 7068 was developed in the middle of the 1990s and is exclusively stocked and supplied in Europe by Smiths High Performance.

Originally designed as a higher-strength alternative than 7075, the alloy offers a highly attractive proposition with better mechanical properties and improved performance in elevated temperatures. Markedly reducing weight or significantly increasing the strength of critical components has resulted in the specification of the alloy across a diverse range of market sectors.



Typical Applications:

- Connecting rods
- Motorsport gearbox actuators
- Motorsport shock absorbers
- Fuel pumps for racing engines
- Rocker arms for racing engines
- Motorcycle gears & chain tensioners
- Bearing caps in high-performance engines
- Autosport wheel components

Stock Availability:

We offer stock availability from 1¼ inch to 7 inch diameter round bars. We also stock forged blocks.

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.



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Further technical data available on the reverse of this Datasheet

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Chemical Composition (weight %)

	Al	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Zr	Each	Total
Min:	Rem			1.60		2.20		7.30		0.05		
Max:	Rem	0.12	0.15	2.40	0.10	3.00	0.05	8.30	0.10	0.15	0.05	0.15

Minimum Mechanical Properties for AMS 4331

Alloy	Round Bar Dia (mm)	Longitudinal Direction Rm in MPa	Longitudinal Direction Rp 0.2 Mpa	Elongation 4D in %
7068	6.35 - 76.2	683	655	5

Minimum Guaranteed Mechanical Properties for 7068 Aluminium

Alloy	Round Bar Dia (mm)	Longitudinal Direction Rm in MPa	Longitudinal Direction Rp 0.2 Mpa	Elongation 4D in %
7068	6.35 - 76.2	683	655	5
7068	76.2 - 114.3	683	655	5
7068	114.3 - 127.0	648	621	5
7068	127.0 - 177.8	610	570	5

Comparison Minimum Properties for 7075 T6511 to AMS 4154

Alloy	Round Bar Dia (mm)	Longitudinal Direction Rm in MPa	Longitudinal Direction Rp 0.2 Mpa	Elongation 4D in %
7075	6.32 - 12.67	558	503	7
7075	12.67 - 76.17	558	496	7
7075	76.17 - 114.27	538	483	6
7075	114.27 - 127.0	538	469	6

...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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