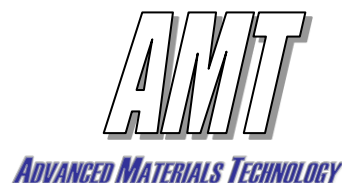


ALUMINUM ALLOYS

Category:

Very high strength



Aluminum-alloy AI-WQ68

Aluminum alloy AI-WQ68 is a very high strength 7000 series (Al-Zn based) Aluminum alloy. It is the highest strength 7000 series alloy made via conventional processing routes. The strength exceeds 700 MPa. This is about 20% higher than for A7075 alloy. AI-WQ68 shows also good properties at elevated temperatures up to 200°C.

General properties

- Very high strength
- Good ductility
- High fatigue strength

Comparison with Standard alloys A7075, A2017

- Advantages:**
- higher strength
 - Good ductility
 - high temp. prop.
- Disadvantages:**
- None

Chemical Composition: Al-8.1Zn-2.8Mg-2.2Cu-0.1Zr

Mechanical properties

Properties of AI-WQ68

Alloy	Condition	UTS (20°C)	YS (20°C)	Elongation	Elastic Modulus
		MPa	MPa	%	GPa
AI-WQ68	T6	712	683	9,5	76
AI-WQ68	Forged+T6	632	530	10	76
AI-WQ68	T76	604	560	8	76

Physical data

Density: 2.88 g/cm³
CTE: 22x10⁻⁶
Thermal conductivity: 120 W/mK

Applications

- Airframe parts
- Structural parts
- Automotive parts

Delivery form

- Bars, Extrusions
- Billets
- Plates



Automotive Gears made of AI-WQ68



Forged Automotive AI-WQ68 Conrod