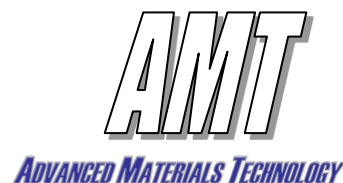


ALUMINUM ALLOYS

Category:

Very high strength



Aluminum-alloy Al-MS78

Aluminum alloy Al-MS78 is a very high strength 7000 series (Al-Zn based) Aluminum alloy. It is the highest strength 7000 series alloy available. The strength exceeds 800 MPa depending on Diameter. This is about 40% higher than for A7075 alloy. .

General properties

- Very high strength
- Good ductility
- High fatigue strength

Comparison with Standard alloys A7075, A2017

- Advantages:**
- higher strength
 - Good ductility
- Disadvantages:**
- High cost

Chemical Composition: Al-Zn-Cu-Mg

Mechanical properties

Properties of Al-MS78

Alloy	Condition	UTS (20°C)	YS (20°C)	Elongation	Elastic Modulus
		MPa	MPa	%	GPa
Al-MS78, D=20mm	T6	802	760	7	75
Al-MS78, D=90mm	T6	760	725	6	75
Al-MS78, D=40mm	T74	540	510	16	75

Physical data

Density: 2.89 g/cm³
CTE: 22x10⁻⁶
Thermal conductivity: 120 W/mK

Applications

- Airframe parts
- Structural parts
- Automotive parts

Delivery form

- Bars, Extrusions
- Billets
- Plates