

Data sheet

EN AW - 6082 based on DIN EN 573

AlSi1MgMn

Chemical composition: (ref.values/mass %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	other elements
0,7 – 1,3	0,5	0,10	0,40 – 1,0	0,60 – 1,2	0,25	0,20	0,10	single 0,05; total 0,15

Mechanical properties: (ref.values DIN EN 586)

Cross-sectional dimension in mm ²	Temper (DIN EN 515)	Yield strength		Tensile strength		Elongation at break		Hardness HBW 2,5/62,5 Guide value	Fatigue strength in MPa ³
		R _{p 0,2} (MPa)		R _m (MPa)		A (%)			
≤ 100	T 6	T ¹⁾	L ²⁾	T	L	T	L	90	100
		250	260	290	310	5	6		

T¹⁾ Transverse direction to the grain flow / L²⁾ Parallel to the grain flow // These are the minimum values according to the standard.

Higher strengths:

Cross-sectional dimension in mm ²	Temper (DIN EN 515)	Yield strength		Tensile strength		Elongation at break		Hardness HBW 2,5/62,5 Guide value	Fatigue strength in MPa ³
		R _{p 0,2} (MPa)		R _m (MPa)		A (%)			
≤ 100	T 6	T ¹⁾	L ²⁾	T	L	T	L	100	120
		290	340	360	380	5	9		

T¹⁾ Transverse direction to the grain flow / L²⁾ Parallel to the grain flow // These are the minimum values according to the standard.

The following information applies to the above alloy

- Additional features:**

Weldability: Corrosion resistance

Gas: 3 Sewater: 2
TIG: 2 Weather: 1
MIG: 1

- Delivery forms:**

Die forging or open die forging.

- Special properties:**

Cold and hot hardenable alloy with good corrosion resistance and increased mechanical strength. Material is also suitable for anodising and decorative effect.

- Application:**

Aluminium alloy with versatile applications e.g. automotive and mechanical engineering. For electrical industry with reduced Cu content.

Notes:

- Cross-sectional dimensions: For larger cross-sections as specified above, the mechanical properties are basically to be determined per each component.
- Source specifications for flexural fatigue strength (www.alu-schlüssel.de).
- Corrosion+welding: Aluminium material data sheet. (evaluation scale: 1= excellent; 2= good; 3=acceptable; 4=inadequate; 5=not recommended; 6= unsuitable)
- All standards in the currently valid version.