

# EN-AW 6082 / AlSi1MgMn

Edition january 2016



Euralco Europe BV  
www.euralco.com

## BRIEF DESCRIPTION

Alloy 6082 is a medium strength alloy with good corrosion resistance, mechanical strength and welding properties.

The combination of these three properties enables it to be used for machine parts and welded constructions.

## PROCESSING METHODS

### Weldability

- TIG/MIG filler alloy      excellent  
AA 4043  
AA 5356
- by resistance      excellent

### Anodizing

- technical      excellent
- decorative      good

### Machinability

good

### Corrosion behaviour

- excellent in inland atmosphere
- good in marine atmosphere

## AVAILABILITY

Alloy 6082 plates are available in temper T6 up to 6mm and T651 > 6mm (quenched – stretched - artificially aged) in the following dimensions :

Thickness	Max. width
0,8 – 2,4mm	2100 mm
2,5 - 102 mm	2250 mm
103 - 123 mm	2020 mm
124 - 150 mm	1800 mm

## CHEMICAL COMPOSITION (weight %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti +Zr
0.7	max.	max.	0.4	0.6	max.	max.	
1.3	0.5	0.1	1.0	1.2	0.25	0.2	-

## PHYSICAL PROPERTIES (nominal values)

Density	2.70 g/cm <sup>3</sup>
Elastic modulus	69000 MPa
Lin. thermal expansion coefficient (20°-100°C)	23.4 10 <sup>-6</sup> K <sup>-1</sup>
Thermal conductivity (Temper T651)	150 - 170 W/mK
Electrical conductivity (Temper T651, 20°C)	24 - 28 MS/m

## MECHANICAL STRENGTH

### Min. tensile properties (Temper T6(51) / EN Standard 485-2)

Thickness (over ... to )	Rm [MPa]	Rp0.2 [MPa]	A50 [%]
0.6 - 3mm	310	260	6
3.1 - 6mm	310	260	10
6.1 - 12.5 mm	300	255	9
12.7 - 60 mm	295	240	8
60 - 100 mm	295	240	7
100 - 150 mm	275	240	6

### Typical strength for various thicknesses

Thickness (over ... to )	Rm [MPa]	Rp0.2 [MPa]	A50 [%]	HB
0,6 - 6 mm	360	330	7	115
6.1 - 60 mm	350	310	11	105
60 - 150 mm	350	310	11	105