

EN AW-6061 / AlMg1SiCu

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Euralco Europe BV
www.euralco.com**BRIEF DESCRIPTION**

6061 is a highly versatile, medium strength alloy whose main characteristics are corrosion resistance, weldability and good mechanical strength. It is mainly used in machine parts, welded constructions and forged parts.

PROCESSING METHODS**Weldability**

TIG/MIG	excellent
filler alloy	AA 4043
	AA 5356
By resistance	excellent

Anodizing

technical	excellent
decorative	good

Machinability	good
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Corrosion Behaviour

excellent in inland atmosphere
good in marine atmosphere

AVAILABILITY

6061 alloy extruded bars and tubes are available in temper O/H111, T4 & T6 in the dimensions:

Diameter

≤ 450 mm

CHEMICAL COMPOSITION (weight %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti + Zr
0.4	max.	0.15	max.	0.8	0.04	max.	
0.8	0.7	0.40	0.15	1.2	0.35	0.25	---

PHYSICAL PROPERTIES (nominal values)

Density	2.70 g/cm ³
Elastic modulus	69000 MPa
Lin. thermal expansion coefficient (20°-100°C)	23.4 · 10 ⁻⁶ K ⁻¹
Thermal conductivity (Temper T651)	150 - 170 W/mK
Electrical conductivity (Temper T651, 20°C)	23 - 26 MS/m

MECHANICAL STRENGTH**Min. tensile properties (EN Standard 755-2)**

Diameter	Temper	Rm [MPa]	Rp0.2 [MPa]	A50 [%]
≤ 200	O, H111	150(max)	110(max)	14
	T4	180	110	13
	T6	260	240	6

Typical strength for various thicknesses

Diameter	Temper	Rm [MPa]	Rp0.2 [Mpa]	A50 [%]
≤ 200	O, H111	145	105	16
	T4	220	150	15
	T6	315	286	9