

EN AW-6111 / AlMgSiCu

Edition January 2014

Euralco Europe BV
www.euralco.com

BRIEF DESCRIPTION

6111 is a high strength alloy mainly used for automotive outer skin applications.

Due to an enhanced artificial aging process that can be combined with a paint baking process the mechanical properties can reach values unknown in the standard 6000 range alloys.

In the 0 and T4 temper this alloy has a good formability.

PROCESSING METHODS

Weldability

TIG/MIG filler alloy excellent
AA 4043
AA 5356

By resistance excellent

Anodizing

technical excellent
decorative good

Machinability good

Corrosion Behaviour

good in inland atmosphere
average in marine atmosphere

AVAILABILITY

6111 sheet is available in tempers T4 and T6 in the following dimensions:

Thickness	Max. width
0.6 - 1.8 mm	2180 mm
2.0 - 3.2 mm	1520 mm

CHEMICAL COMPOSITION (weight %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
0.6	max.	0.5	0.10	0.5	max.	max.	
1.1	0.4	0.9	0.45	1.0	0.1	0.15	0.1

PHYSICAL PROPERTIES (nominal values)

Density	2.71 g/cm ³
Elastic modulus	70,000 MPa
Lin. thermal expansion coefficient (20°-100°C)	24 · 10 ⁻⁶ K ⁻¹
Thermal conductivity (Temper T651)	160 - 190 W/mK
Electrical conductivity (Temper T651, 20°C)	23 - 27 MS/m

MECHANICAL STRENGTH

Typical tensile properties (Temper T4)

Thickness (over ... to)	Rm [MPa]	Rp0.2 [MPa]	A50 [%]
0.8 - 3.2mm	245	125	25

Typical tensile properties (Temper T6)

Thickness (over ... to)	Rm [MPa]	Rp0.2 [MPa]	A50 [%]
0.6 - 1.8mm	360	300	7

(mechanical values for thickness > 1.8mm on request)