

EN AW- 2024 / AlCu4Mg1

Edition February 2005



Euralco Europe BV
www.euralco.com

BRIEF DESCRIPTION

EN AW 2024 sheets and plates are mainly used for machine construction and apparatus subject to static or dynamic loading.

Typical applications include various supports and structural parts of machines.

PROCESSING METHODS

Weldability

- TIG/MIG difficult
- By resistance difficult

Anodising

- technical good
- decorative moderate

Machinability

good

Corrosion behaviour

- moderate in inland atmosphere
- critical in marine atmosphere

AVAILABILITY

EN AW 2024 plates are available in temper T4 (Solution heat-treated (quenched) and strengthened by naturally aging to a substantially stable condition) in the following dimensions :

Thickness	Max. width
0.4 – 6.0mm	1250 mm

CHEMICAL COMPOSITION (weight %)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti +Zr
max. 0.40	max. 0.45	4.0 4.6	0.5 0.8	1.3 1.7	max. 0.05	max. 0.18	max. 0.10

PHYSICAL PROPERTIES (nominal values)

Density	2.78 g/cm ³
Elastic modulus	73000 MPa
Lin. thermal expansion coefficient (20°-100°C)	23.2 10 ⁻⁶ K ⁻¹
Thermal conductivity (Temper T351)	110 - 130 W/mK
Electrical conductivity (Temper T351, 20°C)	16 - 19 MS/m

MECHANICAL STRENGTH

Min. tensile properties (Temper T4 / EN Standard 485-2)

Thickness (over ... to)	Rm [MPa]	Rp0.2 [MPa]	A50 [%]
0.4 – 1.5 mm	425	275	12
1.5 – 6.0 mm	425	275	14

Typical strength for various thicknesses

Thickness (over ... to)	Rm [MPa]	Rp0.2 [MPa]	A50 [%]	HB
0.4 – 1.5 mm	465	290	20	120
1.5 – 3.0 mm	465	290	20	120
3.0 – 6.0 mm	475	295	20	120