

Alloy Designation

ALUMINIUM Quality according to DIN EN 573-3	PREMIUM EN AW-2007
Chem. Designation according to DIN EN 573-3	EN AW- AlCu4PbMgMn
Abbreviation according to DIN 1712-3	AlCuMgPb
Material No. / Werkstoff-Nr. according to DIN 1712-3	3.1645

Specification



Precision round aluminium [PRA]
drawn
Round aluminium [RA]
pressed
L: 500 mm
L: 1,000 mm

Chemical composition EN AW 2007 (reference values as weight percent)

Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Pb
0 - 0.8	0 - 0.8	3.3 - 4.6	0.5 - 1.0	0.4 - 1.8	0 - 0.1	0 - 0.2	0 - 0.8	0 - 0.2	0.8 - 1.5

Mecanical properties (ambient temperatur / thickness dependent)

Tensile strength R_m	approx. 370 - 470 [N/mm ²]
Yield strength $R_{p0.2}$	210 - 250 [MPa]
Elongation A_{50}	6 - 8 [%]
Hardness (delivery condition)	max. 130 [HB]

Physical properties (ambient temperatur / characteristic values)

Density	2.88 [g/cm ³]
Modulus of elasticity	~ 70 [GPa]
Electrical conductivity	18 - 22 [m/Ω · mm ²]
Thermal expansion coefficient	23.0 [K ⁻¹ · 10 ⁻⁶]
Thermal conductivity	130 - 160 [W/m · K]
Specific thermal capacity	900 [J/kg · K]

Technical properties

The age-hardenable alloy EN AW 2007 (AlCuMgPb) is the mainly used free-cutting alloy. It is ideal for machining due to it's high strenght and short chip-break and makes it possible to machine it on high-speed automatic lathes and multi-spindle machines. Due to its low corrosion resistance it is recommended to anodise finished parts for protection.

Applications

Drilling-, turning- and milling properties (free cutting alloy), mechanical engineering and jigs and fixtures, screws, nuts.

