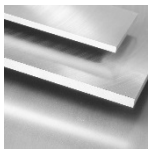
Alloy Designation

ALUMINIUM Quality according to DIN EN 573-3	PREMIUM EN AW-5083
Chem. Designation according to DIN EN 573-3	EN AW-AlMg4,5Mn0,7
Abbreviation according to DIN 1712-3	AlMg4,5Mn
Material No. / Werkstoff-Nr. according to DIN 1712-3	3.3547

Specification



ALU-Präz® [ALU]
L: 500 mm
L: 1.000 mm

Round aluminium [RA]
pressed
L: 500 mm
L: 1.000 mm

Chemical composition EN AW 5083 (reference values as weight percent)

Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
0 - 0,4	0 - 0,4	0 - 0,1	0,4 - 1,0	4,0 - 4,9	0,05 - 0,25	0 - 0,25	0 - 0,15

Mecanical properties (ambient temperatur / thickness dependent)

Tensile strength R_m	approx. 275 - 315 [N/mm²]
Yield strength $R_{p0,2}$	115 - 125 [MPa]
Elongation A_{50}	14 - 16 [%]
Hardness (delivery condition)	max. 100 [HB]

Physical properties (ambient temperatur / characteristic values)

Density	2,66 [g/cm³]
Modulus of elasticity	70 [GPa]
Electrical conductivity	16 - 18 [m/Ω · mm²]
Thermal expansion coefficient	24,2 [$K^{-1} \cdot 10^{-6}$]
Thermal conductivity	110 - 140 [W/m · K]
Specific thermal capacity	900 [J/kg · K]

Technical properties

This universal alloy (here cast version*) has a very high corrosion resistance and can be used effectively in seawater. The cast material is stress-free and therefore easier to machine. Furthermore, EN AW 5083 is very well suited for hard anodising, technical anodising and protective coatings.

*applies to flat material only

Applications

Apparatus engineering, container and vehicle construction, refrigeration technology, naval construction, laminating tools, blow moulds, injection moulds, tool making, mould- and model making.

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