

Material data sheet

EN AW-2017A [EN AW-Al Cu4MgSi]

Compliance with the requirements of the EU directives RoHS 2011/65/EU and ELV 2000/53/EC

1) Chemical composition according to DIN EN 573-3 [% by mass, remainder Al]

%	Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Remarks	Each
min.	0.20	-	3.5	0.40	0.40	-	-	-	-	-	-
max.	0.8	0.7	4.5	1.0	1.0	0.10	-	0.25	-	0.25 Zr + Ti	0.15

2) Mechanical properties according to DIN EN 754-2 drawn / DIN EN 755-2 extruded

Temper	Dimensions in mm		R _m MPa		R _{p0,2} MPa		A%	A _{50mm} %	HBW
	D ^a	S ^b	min.	max.	min.	max.	min.	min.	Typical value
T3^c	≤80	≤80	400	-	250	-	10	8	105
T4/T4510 T4511^c	≤25	≤25	380	-	260	-	12	10	105
	25 < D ≤ 75	25 < S ≤ 75	400	-	270	-	10	-	105
	75 < D ≤ 150	75 < S ≤ 150	390	-	260	-	9	-	105
	150 < D ≤ 200	150 < S ≤ 200	370	-	240	-	8	-	105
	200 < D ≤ 250	200 < S ≤ 250	360	-	220	-	7	-	105

D^a = Diameter for round rod / S^b = Width across flat for square and hexagonal rod, Thickness for rectangular rod / c Properties may be obtained by press quenching.

Classification: 1=very good / 6=insufficient

Physical properties		General properties			
Density g/cm ³	2.80	Corrosion resistance to atmospheric influences	4	Surface treatment Protection anodizing	2
Modulus of elasticity MPa	72500				
Thermal conductivity W/(m K)	130-200	Brazeability: Brazeability with flux	6	Painting/Coating	3
Coefficient of thermal expansion (20-100 °) 10 ⁻⁶ /K	23.0				
Electrical conductivity MS/m	18-28	Friction soldering	3		
		Soft soldering with flux	6		
Weldability		Machining properties			
Gas	6	Annealed			4
TIG	6	Work hardened			3
MIG	6	Precipitation hardened			2
Resistance fusion welding	1	Cutting speed v=m/min			300-800
		Chip shape			Curls/spirals

Errors and changes excepted/This document is not subject to revision.