

Material data sheet

EN AW 2024 [EN AW-Al Cu4Mg1]

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	Bi	Pb	Each
min.	-	-	3.8	0.30	1.2	-	-	-	-	-	-	-
max.	0.5	0.5	4.9	0.9	1.8	0.10	-	0.25	0.15	-	-	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	≤10	≤10	425	-	310	-	10	8	120
	10<D≤80	10<S≤80	425	-	290	-	9	7	120
T3/T3510/ T3511	≤50	≤50	450	-	310	-	8	6	120
	50<D≤100	50<S≤100	440	-	300	-	8	-	120
	100<D≤200	100<S≤200	420	-	280	-	8	-	120
	200<D≤250	200<S≤250	400	-	270	-	-	-	120

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	2.77	Corrosion resistance to atmospheric influences seawater Brazeability: Brazing with flux Brazing without flux Friction soldering Soft soldering with flux	5 5 6 6 3 6	Surface treatment Protection anodizing Decorative anodizing Painting/Coating	2 6 3
Modulus of elasticity MPa	73000				
Thermal conductivity W/(m K)	130-150				
Coefficient of thermal expansion (20-100 °) 10 ⁻⁶ /K	22.9				
Electrical conductivity MS/m	18-21				
Weldability		Machining properties			
Gas	6	Annealed			3
TIG	6	Work hardened			-
MIG	6	Precipitation hardened			2
Resistance fusion welding	1	Cutting speed v=m/min			-
		Chip shape			-

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