Datasheet:

EN AW 2017a
Sheet, strip & plate - Aluminium

Alumeco ApS
19-05-2025

Internal alloy name:	**2017a**
Chemical Symbol:	**EN AW-Al Cu4MgSi(A)**
International alloy name:	**EN AW-2017a**
UNS:	**A92017**
DIN-Werkstoff no.:	**3.1325**
Alloy type:	**Heat treatable alloy**

Main usage:

- Machine and high-strength constructions
- Fasteners
- Aerospace applications
- Rivets

Main properties:

- High strength
- Good workability
- Excellent fatigue resistance

Important norms and literature:

General Standards:
EN 573-3:2013: Aluminium and aluminium alloys – Chemical composistion and form of wrought products – Part 3: Chemical composition and form of products.

Product standards:
EN 485-2:2008: Aluminium and aluminium alloys – Sheet, strip and plate – Part 2: Mechanical properties.

Geometric Tolerance:
EN 485-3:2005: Aluminium and aluminium alloys – Sheet, strip and plate – Part 3: Tolerances on dimensions and form for hot-rolled products

EN 485-4:2000: Aluminium and aluminium alloys – Sheet, strip and plate – Part 4: Tolerances on shape and dimensions for cold-rolled products

Chemical composition in %: EN 573-3:2013

Al	Si	Fe	Cu	Mn	Mg	Cr	Zn	Remarks	Others Max. Each	Others Max. Total
Remainder	0,20 – 0,80	Max. 0,7	3,5 – 4,5	0,40 – 1,0	0,40 – 1,0	Max. 0,1	Max. 0,25	0,25 Zr + Ti	0,05	0,15

Mechanical properties: EN 485-2:2008

Temper	Specified thickness *t* mm	Tensile Stress R_m MPa	Proof Stress $R_{p0,2}$ MPa	Elongation Min. % A_{50mm}	Elongation Min. % A	Bend radius* 180° *t* mm	Bend radius* 180° bend	Bend radius* 90° *t* mm	Bend radius* 90° bend	Hardness HBW
O	0,4 ≤ *t* < 25	Max. 225	Max. 145	12 – 14	12	0,4 - 3,0	1,5 - 2,0 * t	0,4 - 12,5	0 - 4,0 * t	55
T4	0,4 ≤ *t* < 200	Min. 300 – 390	Min. 200 – 245	13 – 15	2 – 12	0,4 - 6,0	3,0 – 5,0 * t	0,4 - 12,5	3,0 - 8,0 * t	101 – 110
T451	0,4 ≤ *t* < 200	Min. 300 – 390	Min. 200 – 245	13 – 15	2 – 12	0,4 - 6,0	3,0 – 5,0 * t	0,4 - 12,5	3,0 - 8,0 * t	101 – 110
T452	150 ≤ *t* < 200	Min. 300 – 330	Min. 200 – 220	-	2	-		-		-
T42	0,4 ≤ *t* < 25	Min. 390	Min. 235	14 - 15	12	-		-		109

*** Thickness depending values**

Physical properties:

Density g/cm³	Solidification range °C	Electrical conductivity %IACS	Thermal conductivity W/m K	Thermal expansion (µm m^{-1} K^{-1})	Annealing temperature °C	E - modulus (N / mm²)
2,8	580 – 650	31 – 48	130 – 200	23,0	380 – 420	72500

Properties and information's (3 high/good; 2 Middle; 1 Poor/bad)

Resistance:
Corrosion index, general: 2
Marine Atm. Corr index: 1

Hot workability:
Extrusion: 1 - 2
Forging: 2

Cold formability:
Cold formability general: 2
Deep drawing: 2
Bending: 2

Weldability
TIG/MIG welding: 1
Resistance welding: 3

Solderability
Brazability index: 2
Solderability index: 2

Machinability
Machinability index: 2

Anodizing:
Decorative anodizing surface treatment: 1
Protective anodizing index: 2
Hard anodizing: 2
Color anodizing: 1