SERIES 2000

AW 2017 A (Al Cu4MgSi(A))

2017 A alloy rods have high mechanical properties and excellent resistance to fatigue. It can be replaced with 2007 alloy, which has the same mechanical properties, but better machinability, allowing greater productivity.

CHEMICAL COMPOSITION (WEIGHT %) (EN 573 - 3)

ELEMENTS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti + Zr	Al
Minimum	0.2	-	3.5	0.4	0.4	-	-	-	-
Maximum	0.8	0.7	4.5	1	1	0.1	0.25	0.25	Rest

MECHANICAL PROPERTIES

PLATES (EN 485-2)

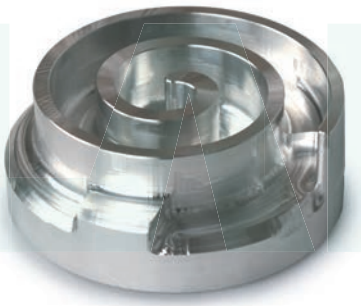
THICKNESSES (from...to)	TEMPER	Rm* (MPa)	Rp0.2* (MPa)	A50* (%)	A* (%)	HB - BRINELL HARDNESS
0.4 - 1.5 mm	T451	390	245	14	-	110
1.5 - 6 mm		390	245	15	-	110
6 - 12.5 mm		390	260	13	-	111
12.5 - 40 mm		390	250	-	12	110
40 - 60 mm		385	245	-	12	108
60 - 80 mm		370	240	-	7	-
80 - 120 mm		360	240	-	6	105

*Minimum values

ROUND RODS (EN 755-2)

DIAMETERS (from...to)	TEMPER	Rm* (MPa)	Rp0.2* (MPa)	A* (%)	HB - BRINELL HARDNESS
25 - 75 mm	T4	400	270	10	105
75 - 150 mm	T4510	390	260	9	105
150 -200 mm	T4511	370	240	8	105

*Minimum values



MAIN CHARACTERISTICS

- Very high mechanical resistance
- Moderate corrosion resistance

APPLICATIONS

- Parts of planes, vehicles and machinery subject to high stress
- High resistance forged parts
- Structural elements requiring high mechanical characteristics

POLISHING

MACHINABILITY

WELDABILITY

ELECTRICAL/THERMAL

≈105 HB
BRINELL HARDNESS

2.78
DENSITY

SERIES 2000

PHYSICAL PROPERTIES

DENSITY	2.78 g/cm^3
MODULUS OF ELASTICITY	72 000 MPa
LINEAR EXPANSION COEFFICIENT	3.6 10^{-6} K^{-1}
THERMAL CONDUCTIVITY	125 - 140 W/mK
ELECTRICAL CONDUCTIVITY	19 - 21 MS/m

PROPERTIES	T451
MACHINABILITY	FAIR
PROTECTIVE ANODIZING	FAIR
DECORATIVE ANODIZING	POOR
HARD ANODIZING	POOR
RESISTANCE TO ATMOSPHERIC CORROSION	FAIR
RESISTANCE TO MARITIME CORROSION	POOR
MIG-TIG WELDABILITY	FAIR
RESISTANCE TO WELDABILITY	GOOD
ABRASIVE WELDABILITY	POOR
COLD PLASTIC FORMABILITY	POOR
HOT PLASTIC FORMABILITY	FAIR

DELIVERY PROGRAM

ROUND RODS

DIAMETER[1] (mm) EXTRUDED	WEIGHT (kg/m)	STOCK T451
Standard length 3000mm		
30	1.979	◒
32	2.251	◒
35	2.693	◒
40	3.518	◒
45	4.552	◒
50	5.497	●
55	6.652	◒
60	7.916	●
65	9.219	◒
70	10.775	◒
75	12.370	◒
80	14.074	◒
90	17.813	◒
100	21.991	◒
110	26.609	●
120	31.668	●
130	37.165	◒
140	43.102	◒
150	49.480	◒

[1] Other diameters available on request.
Material calibrated on request.
Average weights of production.

PLATES

THICKNESS[1] (mm)	DIMENSIONS (mm)	PLATE WEIGHT(kg)	STOCK T451
8	1520 x 3020	102.09	●
10	1520 x 3020	127.61	●
12	1520 x 3020	153.14	●
15	1520 x 3020	191.42	●
20	1520 x 3020	255.23	●
25	1520 x 3020	319.03	●
30	1520 x 3020	382.84	●
35	1520 x 3020	446.63	●
40	1520 x 3020	510.45	●
45	1520 x 3020	578.40	●
50	1520 x 3020	638.07	●
60	1520 x 3020	765.68	●
70	1520 x 3020	893.29	◒
80	1520 x 3020	1020.91	●
90	1520 x 3020	1148.52	◒
100	1520 x 3020	1276.13	●

[1] Other thicknesses available on request.
Average weights of production

● Standard: generally available from stock
◒ Semi-standard: generally not available from stock
○ Non-standard: generally not available from stock, manufactured to order and subject to special conditions.