



SERIES 2000 ●

AW 2007 (Al Cu4PbMgMn)

Among the aluminium alloys suitable for high-speed automatic lathes, alloy 2007 has the highest mechanical characteristics. This alloy is often selected when it is necessary to have a good combination of machinability and high mechanical properties. However, it has low resistance to corrosion.

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

ELEMENTS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Ni	Pb	Bi	Sn	Al
Minimum	-	-	3.3	0.5	0.4	-	-	-	-	0.8	-	-	-
Maximum	0.8	0.8	4.6	1	1.8	0.1	0.8	0.2	0.2	1.5	0.2	0.2	Rest

MECHANICAL PROPERTIES (EN 755 - 2)

EXTRUDED

TEMPER	DIAMETER (mm)	Rm* (MPa)	Rp0.2* (MPa)	A* (%)	HB - BRINELL HARDNESS
T4, T4510, T4511	≤ 80	370	250	8	95
T4, T4510, T4511	80 - 200	340	220	8	95
T4, T4510, T4511	200 - 250	330	210	7	95

*Minimum values

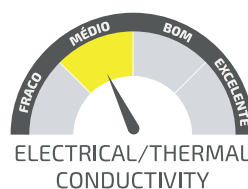
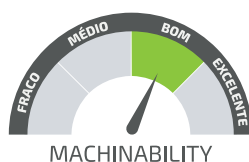


MAIN CHARACTERISTICS

- Alloy with the highest mechanical properties
- Often selected when a combination of good machining and high mechanical properties is required
- Low resistance to corrosion

APPLICATIONS

- Screws
- Nuts
- Threads
- Threaded rods



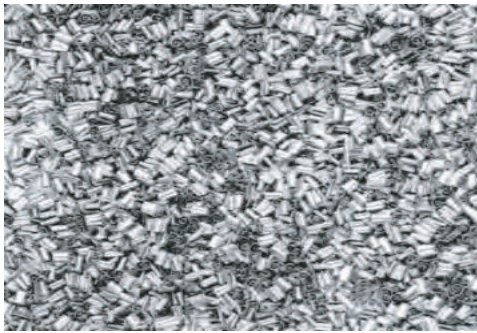
All figures given are indicative only. Polylanema Lda. is not liable for the use of the materials without consulting with our technical department.



SERIES 2000

PHYSICAL PROPERTIES

DENSITY	2.85 g/cm ³
MODULUS OF ELASTICITY	71 000 MPa
LINEAR EXPANSION COEFFICIENT	23.5 10 ⁻⁶ K ⁻¹
THERMAL CONDUCTIVITY	140 W/mK
ELECTRICAL CONDUCTIVITY	53 - 49 MS/m



PROPERTIES	T4
MACHINABILITY	GOOD
PROTECTIVE ANODIZING	FAIR
DECORATIVE ANODIZING	POOR
HARD ANODIZING	POOR
RESISTANCE TO ATMOSPHERIC CORROSION	FAIR
RESISTANCE TO MARITIME CORROSION	POOR
MIG-TIG WELDABILITY	POOR
RESISTANCE TO WELDABILITY	POOR
ABRASIVE WELDABILITY	POOR
COLD PLASTIC FORMABILITY	POOR
HOT PLASTIC FORMABILITY	FAIR

DELIVERY PROGRAM

ROUND RODS

DIAM. ¹ (mm) EXTRUDIDO	WEIGHT (kg/m)	STOCK T4	STOCK T4511	DIAM. ¹ (mm) EXTRUDIDO	WEIGHT (kg/m)	STOCK T4	STOCK T4511
Standard length 3000mm							
20	0.879	●	○	120	31.668	●	○
25	1.374	●	○	130	37.165	●	○
30	1.979	●	○	140	43.102	●	○
32	2.251	●	○	150	49.480	●	○
35	2.693	●	○	160	56.297	●	○
40	3.518	●	○	170	63.554	●	○
45	4.552	●	○	180	71.251	●	○
50	5.497	●	○	190	77.900	●	○
55	6.652	●	○	200	86.300	●	○
60	7.916	●	○	210	95.200	●	○
65	9.291	●	○	225	111.375	●	○
70	10.775	●	○	250	135.000	○	○
75	12.370	●	○	254	144.00	●	○
80	14.074	●	○	260	146.000	●	○
85	15.888	●	○	270	153.400	○	○
90	17.813	●	○	275	166.375	●	○
100	21.991	●	○	300	194.300	○	○
110	26.609	●	○	304.8	211.00	●	○
115	29.083	●	○				

¹ Other diameters available on request.

Material calibrated 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.

SQUARE RODS

THICKNESS ¹ (mm)	WEIGHT (kg/m)	STOCK T4
Standard length 3000mm		
30	2.520	○
35	3.430	○
40	4.480	○
45	5.670	○
50	7.000	○
60	10.080	○
70	13.720	●
80	17.920	●
90	22.680	○
100	28.000	●
110	33.880	○
120	40.320	○
130	47.320	○
150	67.800	○

¹ Other thicknesses available on request.

Material calibrated on request.

Average weights of production