



ALUMINIUMS Alloys Aluminium - Copper 2030

Chemical composition

%	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Bi	Pb	Others	Al
Minimum			3,30	0,20	0,50					0,8		
Maximum	0,80	0,70	4,50	1,00	1,30	0,10	0,50	0,20	0,20	1,50		rest

International Equivalences

Europe	USA	Spain	France	Germany	G.B.	Italy	Sweden	Switzerland	Japan
E.N. 573	A.A.	U.N.E.	AFNOR	D.I.N.	B.S.	U.N.I.	S.I.S.	V.S.M.	J.I.S.
EN AW 2030	2030	38.319 L-3121	A-U4Pb	3.1645 AlCuMgPb	7L25		4335	AlCu4MgPb	

Mechanical properties

Standard: UNE 38323 Alloy: EN AW-2030 [Al Cu4PbMg]

Spoke/Cold worked bar

Treatment state ⁵⁾	Measurements mm		R _m Mpa		R _{p0,2} Mpa		A %	A _{50 mm} %	Hardness HB
	D ¹⁾	S ²⁾	min.	max.		min.	max.	min	
T3 ⁴⁾	≤30	≤30	370	–	240	–	7	5	
	30 < D ≤ 80	30 < S ≤ 80	340	– 220		–	6	–	115
T351 ⁴⁾	≤80	≤80	370	–	240	–	5	3	

Cold worked tube

Treatment state ⁵⁾	Measurements mm e ³⁾	R _m MPa		R _{p0,2} MPa		A %	A _{50 mm} %
		min.	max.	min.	max.	min	min.
T3 ⁴⁾	≤20	370	–	240	–	7	5
T3510, T3511 ⁴⁾	≤20	370	–	240	–	5	3

Extruded bar

Treatment state ⁵⁾	Measurements mm		R _m MPa		R _{p0,2} MPa		A %	A _{50 mm} %	Hardness HB
	D ¹⁾	S ²⁾	min.	max.	min.	max.	min	min.	
T4, T4510, T4511 ⁴⁾	≤ 80	≤ 80	370	–	250	–	8	6	115
	80 < D ≤ 200	80 < S ≤ 200	340	–	220	–	8	–	115
	200 < D ≤ 250	200 < S ≤ 250	330	–	210	–	7	–	115

1) D = Diameter of circular section bars.

2) S = Distance between faces for square-section and hexagonal bars, thickness for rectangular section bars.

3) e = Wall thickness.

4) The characteristics can be obtained by means of cooling in a press

5) Treatment state based on Standard UNE-EN 515



Mechanical properties

Standard: UNE 38323 Alloy: EN AW-2030 [Al Cu4PbMg]

Extruded tube

Treatment state ⁵⁾	Measurements mm e ³⁾	R _m MPa		R _{p0,2} MPa		A %	A _{50 mm} %
		min.	max.	min.	max.	min	min.
T4, T4510, T4511 ⁴⁾	≤ 25	370	–	250	–	8	6

Extruded profile

Treatment state ⁵⁾	Measurements mm e ³⁾	R _m MPa		R _{p0,2} MPa		A %	A _{50 mm} %
		min.	max.	min.	max.	min	min.
T4, T4510, T4511 ⁴⁾	≤ 30	370	–	280	–	8	6

Physical properties

Modulus of elasticity N/mm ²	Specific weight g/cm ³	Melting temperature °C	Linear expansion coefficient 1/10 ⁶ K	Thermal conductivity W/mK	Electrical resistivity at 20°C - μΩ cm	Electrical conductivity% IACS	Dissolution potential V
72.500	2,82	510-650	23	134	5,1	3,4	-0,87

Technological suitabilities

Welding		Natural behaviour		Anodized		Mechanization	State T4
Under flame	M	In a rural environment	R	For protection	R	Chip fragmentation	MB
At the arc under argon gas	M	In an industrial environment	R	Decorative	M	Surface gloss	R
Owing to electrical resistance	B	In a marine environment	M	Hard anodized	R		
Brazed	M	In sea water	M				

Thermal treatments

Forging temperature interval: 380° - 460°C.
 Total annealing: 420°C with long-term cooling up to 250°C.
 Partial annealing: 340°C.

Products

Bars, tubes, extruded profiles.

Observations and applications

As with alloy 2011, it is characterised by high mechanical resistance and ease of machining, making them appropriate for turning works. Owing to the high machinability, you are recommended to use it when working at high speeds with high performance and excellent chip detachment.