Chemical composition

%	Si	Fe	Cu	Mn	Mg	Cr	Zn	Others	Others	Al
Minimum				0,05	1,0	0,10	4,0	Each	Total	
Maximum	0,35	0,40	0,20	0,50	1,4	0,35	5,0	0,05	0,15	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 7020	7020	L3741 38.374	A-Z4G	AlZn4,5Mg1 3.4335	H17	7791 9007/P1	4425	AlZn4,5Mg1	A7020

Mechanical properties of sheets Standard: EN 485-2 Aluminium EN AW-7020 [Al Zn4,5Mg1]

Treatment state	Nominal thickness mm		R_m MPa		$R_{p0,2}$ MPa		Min. elongation %		Bending radius		Hardness HBS[1]
	Greater than	up to	min.	max.	min.	max.	A_{50mm}	A	180º	90º	
O	≥0,4	1,5		220		140	12				45
	1,5	3,0		220		140	13				45
	3,0	6,0		220		140	15				45
	6,0	12,5		220		140	12				45
T4, T451[2)3)]	≥0,4	1,5	320		210		11			2,0 *t*	92
	1,5	3,0	320		210		12			2,5 *t*	92
	3,0	6,0	320		210		13			3,5 *t*	92
	6,0	12,5	320		210		14			5,0 *t*	92
T6, T651, T62[2)]	≥0,4	1,5	350		280		7			3,5 *t*	104
	1,5	3,0	350		280		8			4,0 *t*	104
	3,0	6,0	350		280		10			5,5 *t*	104
	6,0	12,5	350		280		10			8,0 *t*	104
T651	12,5	40,0	350		280			9			104
	40,0	100,0	340		270			8			101
	100,0	150,0	330		260			7			98
	150,0	175,0	330		260			6			98

For new applications of this alloy, which entails certain properties like corrosion-proofing, toughness, fatigue resistance, you are strongly recommended to consult us with a view to making a more thorough selection of the material.
1) Solely for information.
2) Far lower bending radii can be obtained immediately after the tempering.
3) Avoid use of this alloy in finished products in states T4 or T451. The mechanical properties specified are obtained only after three months natural aging at room temperature. This maturation can be roughly obtained keeping the samples tempered for 60h at a temperature between 60 °C and 65 °C.

Mechanical properties

Standard: EN 755-2 **Alloy: EN AW-7020 [Al Zn4,5Mg1]**

Extruded bar

Treatment state	Measurements mm		R_m MPa		$R_{p0,2}$ MPa		A %	$A_{50\ mm}$ %
	D[1]	S[2]	min.	max.	min.	max.	min	min.
T6[5]	≤ 50	≤ 50	350	–	290	–	10	8
	50 < *D* ≤ 200	50 < *S* ≤ 200	340	–	275	–	10	–

Extruded tube

Treatment state	Measurements mm e[3]	R_m MPa		$R_{p0,2}$ MPa		A %	$A_{50\ mm}$ %
		min.	max. min.		max.	min	min.
T6[5]	≤ 15	350	–	290	–	10	8

Extruded profile

Treatment state	Measurements mm e[3]	R_m MPa		$R_{p0,2}$ MPa		A %	$A_{50\ mm}$ %
		min.	max. min. max.			min	min.
T6[5]	≤ 40	350	– 290 –			10	8

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

Physical properties

Modulus of elasticity N/mm²	Specific weight g/cm³	Melting temperature ºC	Linear expansion coefficient 1/10⁶K	Thermal conductivity W/mK	Electrical resistivity at 20ºC - μΩ cm	Electrical conductivity% IACS	Dissolution potential V
70.000	2,78	605-645	23,3	T5-139 T6-140	T5-5 T6-5	T5-35 T6-35	

Technological suitabilities

Welding		Natural behaviour		Anodized		Mechanization	State T5	State T6
Under flame	B	In a rural environment	B	For protection	B	Chip fragmentation	B	B
At the arc under argon gas	B	In an industrial environment	B	Decorative	R	Surface gloss	B	B
Owing to electrical resistance	B	In a marine environment	R	Hard anodized	MB			
Brazed	B	In sea water	R					

Thermal treatments	Products	Observations and applications
	Bars, extruded profiles, tubes, sheets, plates.	Alloy endowed with average mechanical characteristics, but highly suitable for welding, good corrosion resistance and good surface finish after protection anodization and hard. Typical uses of this alloy are: structures entailing welding, with tempering treatment not being vital after welding as maturation is sufficient to obtain good mechanical characteristics. It is also used in mechanical applications, armament, transport, aeronautical constructions etc.