

Aluminium Wire

Chemical Composition

CHEMICAL COMPOSITION EN 573-3

Designation of the material		Chemical Composition									Other elements		Min. Al
Classification symbols	Numerical classification	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Notes	Each	Total	
EN AW-1050A	EN AW-Al 99.5	0.25	0.40	0.05	0.05	0.05	-	0.07	0.05				99.5
EN AW-2017A	EN AW-Al CuMgSi (A)	0.20 - 0.8	0.70	3.5 - 4.5	0.40 - 1.0	0.40 - 1.0	0.10	0.25	0.25 (Ti+Zr)		0.05	0.15	Remainder
EN AW-2024	EN AW-Al Cu4MgSi	0.50	0.50	3.8 - 4.9	0.30 - 0.9	1.2 - 1.8	0.10	0.25	0.15				
EN AW-5052	EN AW-Al Cu4Mg1	0.25	0.40	0.10	0.10	2.2 - 2.8	0.15 - 0.35	0.15 - 0.35	0.10		0.05	0.15	Remainder
EN AW-5754	EN AW-Al Mg3	0.40	0.40	0.10	0.50	2.6 - 3.6	0.30	0.20	0.15	0.10 - 0.6 Mn + Cr	0.05	0.15	Remainder
EM AW-6082	EN AW-Al Si1MgMn	0.7 - 1.3	0.50	0.10	0.40 - 1.00	0.6 - 1.2	0.25	0.20	0.10		0.05	0.15	Remainder
EN AW-7075	EN AW-Al Zn5.5MgCu	0.40	0.50	1.2 - 2.0	0.30	2.1 - 2.9	0.18 - 0.28	5.1 - 6.1	0.2 - 0.25 (Zr+Ti)		0.05	0.15	Remainder

Equivalents

Classification of symbols	Numerical classification	Approximate international equivalents		
		US (AISI)	Japan (JIS)	China (GB)
EN AW-1050A	EN AW-Al 99.5			
EN AW-2017A	EN AW-Al CuMgSi (A)			
EN AW-2024	EN AW-Al Cu4MgSi			
EN AW-5052	EN AW-Al Cu4Mg1			
EN AW-5754	EN AW-Al Mg3			
EN AW-6082	EN AW-Al Si1MgMn			
EN AW-7075	EN AW-Al Zn5.5MgCu			

Mechanical properties

MECHANICAL PROPERTIES EN 1301-2

1000 SERIES (AL)

Designation of the material	Metallurgical condition	Diameter d up to & including (mm)	Tensile strength		Yield strength $R_{p0.2}$ MPa	Elongation $A_{100\ mm}$ (%)		
			R_m MPA					
			min.	max.				
EN AW-1050A [Al 99.5]	O	20	-	95	-	35		
	H14	18	100	-	95	5		
	H16	15	120	-	115	3		
	H18	10	140	-	135	3		

2000 SERIES (AL CU)

Designation of the material	Metallurgical condition	Diameter d up to & including (mm)	Tensile strength		Yield strength $R_{p0.2}$ MPa	Elongation $A_{100\ mm}$ (%)		
			R_m MPA					
			min.	max.				
EN AW-2017A [Al Cu4MgSi(A)]	H13	18	210	300	190	5		
	T4	18	380	-	255	18		
	H18	10	315	-	-	-		
EN AW-2024 [Al Cu4Mg1]	H13	18	230	300	200	5		
	T4	18	420	-	315	18		
	H18	10	320	-	-	-		

* The data contained in this catalogue are for information purposes only and are not under any circumstances, contractual supply conditions. Errors and omissions excepted.

5000 SERIES (AL MN)

Designation of the material	Metallurgical condition	Diameter d up to & including (mm)	Tensile strength		Yield strength $R_{p0.2}$ MPa	Elongation $A_{100 \text{ mm}}$ (%)		
			R_m MPA					
			min.	max.				
EN AW-5052 [Al Mg2.5]	O	20	-	225	100	15		
	H14	18	225	275	225	4		
	H18	10	275	-	275	3		
	H32	18	190	240	145	11		
	H34	15	215	265	195	8		
	H38	10	260	-	245	5		
EN AW-5754 [Al Mg3]	O	20	-	250	110	16		
	H12	18	230	280	200	6		
	H14	18	255	305	250	3		
	H18	10	305	-	300	2		
	H32	18	220	270	160	11		
	H34	15	245	295	210	8		
	H38	10	290	-	260	4		

6000 SERIES (AL MGSI)

Designation of the material	Metallurgical condition	Diameter d up to & including (mm)	Tensile strength		Yield strength Rp0.2	Elongation		
			R_m					
			MPA					
			min.	max.				
EN AW-6082 [Al Si1MgMn]	H13	≤ 18	165	225	130	4		
	H18	≤ 10	220	-	200	2		
	T39	≥ 6	310	-	-	-		
	T39	< 6	360	-	-	-		
	T4	≤ 20	205	285	135	13		
	T6	≤ 20	300	-	270	10		
	T89	< 6	340	-	-	-		

7000 SERIES (AL ZN)

Designation of the material	Metallurgical condition	Diameter d up to & including (mm)	Tensile strength		Yield strength Rp0.2	Elongation		
			R_m					
			MPA					
			min.	max.				
EN AW-7075 [Al Zn5.5MgCu]	O	20	-	275	110	13		
	H13	18	230	310	230	2.5		
	H18	10	285	-	260	2		
	T6	20	510	-	485	10		

Finishes

- To be determined under a commercial agreement when placing the order or requesting the quote.

Tolerances

DIMENSIONAL TOLERANCES ACCORDING TO STANDARD UNE-EN 1301-3

DIMENSIONAL TOLERANCES ROUND WIRE

Specified diameter		Tolerance
From	To (inclusive)	General Application
-	1	± 0.02
1	3	± 0.03
3	6	± 0.04
6	10	± 0.05
10	15	± 0.07
15	20	± 0.11

DIMENSIONAL TOLERANCES RECTANGULAR WIRE

Width or thickness		Tolerance	
From	To	Thickness	Width
-	1	± 0.03	± 0.04
1	3	± 0.04	± 0.05
3	6	± 0.05	± 0.07
6	10	± 0.07	± 0.1
10	15	± 0.1	± 0.14
15	20	± 0.14	± 0.18

STANDARD LENGTH TOLERANCES

NOMINAL LENGTH	TOLERANCE
L < = 1000 mm.	+/- 1 mm.
1000 < L < = 4000	- 0mm. / +3 mm.