

6060**EN AW-6060 - EN AW-AI Mg Si****ALMET MARINE****Chemical composition :**

According to: EN 573-3:2009(F)

Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Ga	V	remarks	Others		Aluminium min
												Each	Total	
0,30 - 0,60	0,10 - 0,30	0,10	0,1	0,35 - 0,60	0,05	...	0,15	0,1	...	...	...	0,05	0,15	Balance

Typical physical properties:

According to: "mill products general properties" Pechiney

1MPa = 1N/mm²

Density g/cm ³	2,7	Poisson ratio	0,33
Melting range °C	615 - 655	Thermal conductivity (0 to 100°C)- W/m °C (T5 temper)	200
Coefficient of linear expansion (0 to 100°C)-°C-1 x 10(6)	23,4	Resistivity at 20°C - μΩ cm (T5 temper)	3,3
Modulus of elasticity MPa (average)	69 500	Specific heat (0 to 100°C) J/kg °C	945

Technological properties :

According to: "mill products general properties" Pechiney

(A)-Very good (B)-Good (C)-Acceptable (D)-Poor or not recommended

Welding:

Electron beam
Inert gas (TIG or MIG)
Resistance welding
Soldering

A
B
A
A

Deep drawing:

Annealed
1/2 hard
4/4 hard
Spinning O temper

Normal behaviour

Atmospheric corrosion
Marine environments
Machinability T5 temper
Break-up of chip

A
B
C

Anodizing

Protective
Bright
Hard

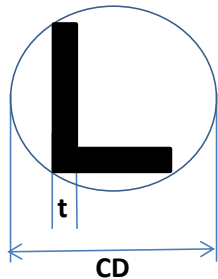
A
B
A

Tolerances on width, depth or flat width

According to: EN 755-9 2008 (F)

Extracts from EN standard, please refer to EN standard for full specifications.

Dimensions in millimeters

STANDARD PROFILES

Flat width		Flat tolerances for circumscribed circle CD a) b)				
		CD ≤ 100	100 < CD ≤ 200	200 < CD ≤ 300	300 < CD ≤ 500	500 < CD ≤ 800
Superior to	Inferior or equal to					
...	10	± 0,25	± 0,30	± 0,35	± 0,40	± 0,50
10	25	± 0,30	± 0,40	± 0,50	± 0,60	± 0,70
25	50	± 0,50	± 0,60	± 0,80	± 0,90	± 1,00
50	100	± 0,70	± 0,90	± 1,10	± 1,30	± 1,50
100	150	...	± 1,10	± 1,30	± 1,50	± 1,70
150	200	...	± 1,30	± 1,50	± 1,80	± 2,00
200	300	...	...	± 1,70	± 2,10	± 2,40
300	450	...	...	...	± 2,80	± 3,00
450	600	...	...	...	± 3,80	± 4,20
600	800	...	...	...	...	± 5,00

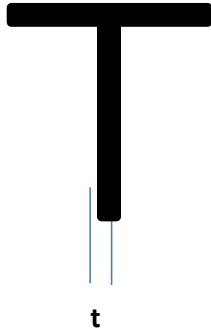
Alloys of group I : 6060, 6005 (for other alloys, please refer to EN standards).

(a) These tolerances do not apply for O and Tx510 tempers. For these tempers, tolerances must be agreed between buyer and supplier.

(b) General tolerances, see EN standards for specific tolerances (ie, on open ends to which data must be added).

Thickness tolerances:

Alloys of group I : AW-6060, AW-6005 (for other alloys, please refer to EN standard).



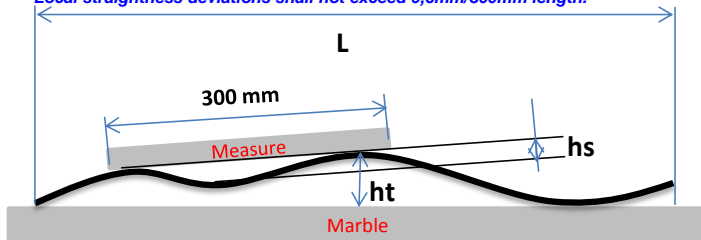
According to: EN 755-9 2008 (F) Extracts from EN standard, please refer to EN standard for full specifications. Dimensions in millimeters

Nominal wall thickness t		Wall thickness tolerances for circumscribed CD	
		CD ≤ 100	100 < CD ≤ 300
Superior to	Inferior or equal to		
...	1,5	± 0,20	± 0,30
1,5	3	± 0,25	± 0,40
3	6	± 0,40	± 0,60
6	10	± 0,60	± 0,80
10	15	± 0,80	± 1,00
15	20	± 1,20	± 1,50
20	30	± 1,50	± 1,80
30	40	...	± 2,00
40	50	...	...



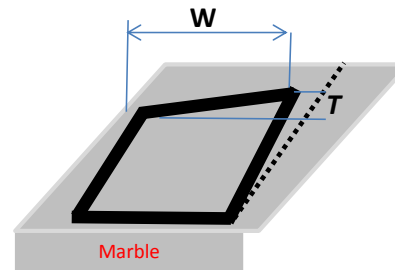
Straightness tolerances:

Straightness tolerance shall not exceed 1,5mm/m length.
Local straightness deviations shall not exceed 0,6mm/300mm length.



Twist tolerances:

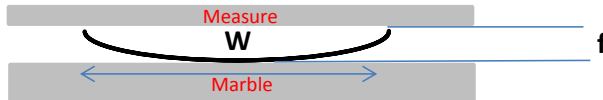
Straightness tolerance ht shall not exceed 1,5mm



Dimensions in millimeters

Width W		Twist tolerances T		
		On a total length of		
> to	≤ to	On a 1000 mm length	≤ to 6000 mm	> to 6000 mm
...	30	1,2	2,5	3,0
30	50	1,5	3,0	4,0
50	100	2,0	3,5	5,0
100	200	2,5	5,0	7,0
200	300	2,5	6,0	8,0
300	450	3,0	8,0	...

Concavity - convexity tolerances:



Dimensions in millimeters

Width W		Maximum allowable deviation f
> to	≤ or = to	
...	30	0,20
30	60	0,30
60	100	0,40
100	150	0,60
150	200	0,80
200	300	1,20
300	400	1,60
400	500	2,00

Mechanical properties at room temperature :

According to: EN 755-2 : 2008 (F) in MPA 1mpa = 1 N/m/m2

* Values offered merely as a guide

Extruded profile:

Product	Temper	Thickness t mm	TENSILE PROPERTIES					Hardness		
			Rm-UTS min (Mpa)	Rm-UTS max (Mpa)	Rp0,2MPa-0,2%ps	A% min	A% 50mm	HBW *		
6060 Extruded profile	T4 c)	<= 25	120	...	60	16	14			50
6060 Extruded profile	T5	<= 5	160	...	120	8	6			60
6060 Extruded profile	T5	5 < t <= 25	140	...	100	8	6			60
6060 Extruded profile	T6 c)	<= 3	190	...	150	8	6			70
6060 Extruded profile	T6 c)	3 < t <= 25	170	...	140	8	6			70
6060 Extruded profile	T64 c)d)	<= 15	180	...	120	12	10			60
6060 Extruded profile	T66 c)	<= 3	215	...	160	8	6			75
6060 Extruded profile	T66 c)	3 < t <= 25	195	...	150	8	6			75

c) Characteristics can be obtained by press quenching

d) Bending quality