

AW 5083 LAMINATED (Al Mg4,5Mn0,7)

Aluminium 5083 contains from 3 to 5% addition of chromium and manganese, presenting the best characteristics of the 5000 series semi-finished aluminium alloys. It guarantees good weldability, and an interesting resistance, especially in the marine atmosphere. They are widely used in the naval segment and in the industry in general.



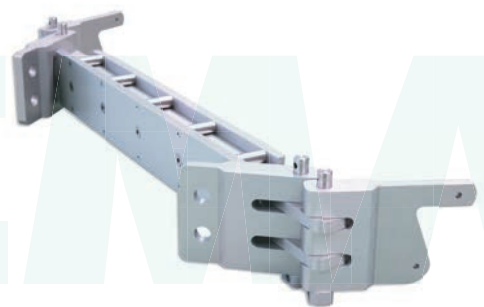
CHEMICAL COMPOSITION (WEIGHT %) (EN 573 - 3)

ELEMENTS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti	Al
Minimum	-	-	-	0.4	4	0.05	-	-	-
Maximum	0.4	0.04	0.1	1	4.9	0.25	0.25	0.15	Rest

MECHANICAL PROPERTIES (EN 485 - 2)

THICKNESS (mm)	TEMPER	Rm (MPa)		Rp0.2* (MPa)	A50 (%)	A (%)	HB - BRINELL HARDNESS
		min.	max.				
3 - 6.3	H111	275	350	125	15	-	75
6.3 - 12.5		270	345	115	16	-	75
12.5 - 50		270	345	115	-	15	75
50 - 80		270	345	115	-	14	73
80 - 120		260	-	110	-	12	70
120 - 200		255	-	105	-	12	69
200 - 250		250	-	95	-	10	69
250 - 300		245	-	90	-	9	69

*Minimum values.

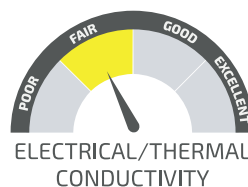


MAIN CHARACTERISTICS

- Good machining
- Excellent dimensional stability
- Very good weldability
- Excellent resistance to corrosion
- Very good thermal conductivity
- Excellent anodizing

APPLICATIONS

- Welded mechanical assemblies
- Chemical industry
- Refrigeration engineering
- Prototypes of mould support plates, blow moulds and mould tools
- Equipment and containers
- Shipbuilding





PHYSICAL PROPERTIES

DENSITY	2.66 g/cm ³
MODULUS OF ELASTICITY	71 000 MPa
LINEAR EXPANSION COEFFICIENT	24.2 10 ⁻⁶ /K
THERMAL CONDUCTIVITY	120 W/mK
ELECTRICAL CONDUCTIVITY	17 - 19 m/Ohm mm ²

DELIVERY PROGRAM

PLATES

THICKNESSES (mm)	DIMENSIONS (mm)	PLATE WEIGHT(kg)	STOCK H111	THICKNESSES (mm)	DIMENSIONS (mm)	PLATE WEIGHT(kg)	STOCK H111
6	1020 x 2020	32.88	●	30	1270 x 2520	255.39	●
	1270 x 2020	51.08	●		1520 x 3020	366.31	●
	1500 x 3000	73.26	●	35	1270 x 2520	297.96	●
8	1020 x 2020	44.50	●		1520 x 3020	427.37	●
	1270 x 2520	68.11	●	40	1270 x 2520	340.52	●
	1520 x 3020	97.68	●		1520 x 3020	488.42	●
10	1020 x 2020	55.65	●	45	1270 x 2520	383.09	●
	1270 x 2520	85.13	●		1520 x 3020	549.47	●
	1520 x 3020	122.11	●	50	1270 x 2520	425.65	●
12	1020 x 2020	66.76	●		1520 x 3020	610.52	●
	1270 x 2520	102.16	●	55	1520 x 3020	671.58	●
	1520 x 3020	146.53	●		1270 x 2520	510.78	●
15	1020 x 2020	83.50	●	60	1520 x 3020	732.63	●
	1270 x 2520	127.70	●		1270 x 2520	595.92	●
	1520 x 3020	183.16	●	70	1520 x 3020	854.73	●
20	1020 x 2020	111.30	●		80	1270 x 2520	681.05
	1270 x 2520	170.26	●	1520 x 3020		976.84	●
	1520 x 3020	244.21	●	90	1270 x 2520	766.18	●
25	1270 x 2520	212.83	●		1520 x 3020	1098.94	●
	1520 x 3020	305.26	●	100	1520 x 3020	1221.05	●
					110	1520 x 3020	1343.15
				120	1520 x 3020	1465.26	○
				130	1520 x 3020	1587.36	○
				140	1520 x 3020	1709.47	○
				150	1520 x 3020	1831.57	○

Average weights of production.
Other dimensions on request.

SHEETS

THICKNESSES (mm)	DIMENSIONS (mm)	SHEET WEIGHT(kg)	STOCK H111
4	1020 x 2020	21.92	●
	1270 x 2520	34.05	●
	1500 x 3000	48.84	●
5	1020 x 2020	27.40	●
	1270 x 2520	42.57	●
	1500 x 3000	61.05	●

Average weights of production.
Other dimensions on request.

FOOD INDUSTRY

5083 alloy laminated plates are approved for food contact according to EN 602:2004. For this reason, this material is used in a variety of applications in industrial plants of the food industry.



● 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.