SERIES 5000

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

This quality is obtained by CAST process, which allows the material to have a good dimensional stability and homogeneity. Usually used in prototype moulds, stamping moulds, casting moulds, foam and blow moulds.

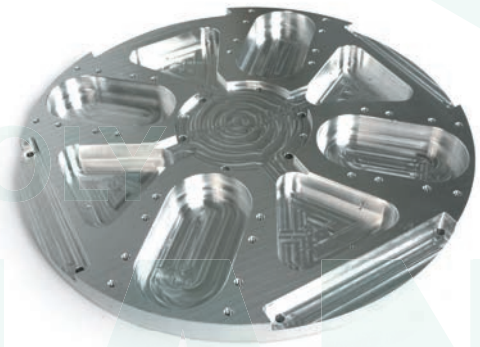
CHEMICAL COMPOSITION (WEIGHT %) (EN 573 - 3)

ELEMENTS	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti + Zr	Al
Minimum	-	-	-	0.4	4.0	0.05	-	-	-
Maximum	0.4	0.4	0.1	1	4.9	0.25	0.25	0.15	Rest

MECHANICAL PROPERTIES

THICKNESSES (from...to)	Rm (MPa)	Rp0.2 (MPa)	A50 (%)	HB - BRINELL HARDNESS
30 - 500 mm	230 - 290	110 - 130	10 - 15	68 - 75

Information transcribed from the supplier datasheet.



MAIN CHARACTERISTICS

Excellent dimensional stability

Low level of internal residual stresses, which considerably reduces the deformation effects of the material during machining

Immediate availability (thicknesses up to 500mm)

APPLICATIONS

- Use in patterns and models
- Control and calibration tools
- Prototype moulds
- Thermoformed moulds

POLISHING

MACHINABILITY

WELDABILITY

ELECTRICAL/THERMAL CONDUCTIVITY

≈70 HB
BRINELL HARDNESS

2.66
DENSITY

SERIES 5000

PHYSICAL PROPERTIES

DENSITY	2.66 g/cm^3
MODULUS OF ELASTICITY	71 000 MPa
LINEAR EXPANSION COEFFICIENT	23.5 x 10^{-6}K^{-1}
THERMAL CONDUCTIVITY	110 - 140 W/mK
ELECTRICAL CONDUCTIVITY	16 - 18 m/Ω mm^3

DELIVERY PROGRAM

PLATES

THICKNESSES (mm)	DIMENSIONS (mm)	PLATE WEIGHT(kg)	STOCK
30	1520 x 3020	371.85	●
	2150 x 4000	696.60	●
40	1520 x 3020	495.75	●
	2150 x 4000	928.80	●
50	1520 x 3020	619.70	●
	2150 x 4000	1161.00	●
60	1520 x 3020	743.70	●
	2150 x 4000	1393.20	●
70	1520 x 3020	867.60	●
	2150 x 4000	1625.40	●
80	1520 x 3020	991.60	●
	2150 x 4000	1857.60	●
90	1520 x 3020	1115.49	●
	2150 x 4000	2089.80	●
100	1570 x 3020	1280.20	●
	2150 x 4000	2322.00	◒
110	1520 x 3020	1363.35	●
	2150 x 4000	2554.20	●
120	1520 x 3020	1487.30	●
	2000 x 4000	2592.00	●
130	1520 x 3020	1611.25	●
140	1520 x 3020	1735.20	●
150	1570 x 3020	1920.30	●
160	1570 x 3020	2048.30	●
170	1570 x 3020	2176.29	●
180	1570 x 3020	2304.32	●
190	1570 x 3020	2432.33	◒
200	1570 x 3020	2560.36	●
220	1520 x 3020	2726.70	●
250	1520 x 3020	3098.52	●
280	1520 x 3020	3470.34	●
305	1700 x 3040	4255.85	●
350	1520 x 3020	4337.93	●
405	1570 x 3040	5219.10	●
500	1520 x 3020	6197.00	●

Average weights of production.
Other dimensions on request.

MACHINABILITY	
HOMOGENIZED	EXCELLENT
DIMENSIONAL STABILITY	EXCELLENT
EROSION	EXCELLENT

SURFACE TREATMENT	
PROTECTIVE ANODIZING	GOOD
SPECIAL ANODIZING QUALITY	-
DECORATIVE ANODIZING	UNSUITABLE
PAINTING / COATING	POOR
POLISHING	FAIR/GOOD

RESISTANCE TO CORROSION	
NORMAL ATMOSPHERE	EXCELLENT
MARITIME ATMOSPHERE	EXCELLENT

(COLD) FORMING	
FOLDING	UNSUITABLE
ROTARY MOVEMENT	UNSUITABLE
DEEP STAMPING	UNSUITABLE
BULGING	UNSUITABLE
COLD EXTRUSION	UNSUITABLE

WELDABILITY	
GAS	POOR
WIG	GOOD
MIG	GOOD
RESISTANCE FUSION WELDING	GOOD

IT CAN BE USED IN VARIOUS APPLICATIONS **INCLUDING IN THE FOOD INDUSTRY (DIN EN 602:2004)**

● 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.