



Aluminium Alloy 5083 (EN AW 5083 AlMg4,5Mn)
According to EU directives: 2000/53/CE (ELV) - 2011/65/CE (RoHS II)

- Aluminium-magnesium alloy.
- They are used for the realization of all precision mechanical components
- The dimensional stability is guaranteed during and after processing.

		THICKNESS	
		6,35≤100	
		CAST PLATES	
Physical state			
Mechanical properties			
Ultimate tensile strenght Rm[N/mm ²]	minimal	240	
Yield strenght Rp 0,2	minimal	110	
Elongation A ₅	minimal	15	
Hardness Brinnel HB (information only)	minimal	70	
Physical properties			
Density [kg/dm ³]		2,66	
Module of elasticity [Gpa]		71	
Electrical conductivity at 20 °C [m/Ω-mm ²]		18	
Coefficient of thermal expansion [10 ⁻⁶ /K]		24,2	
Thermal conductivity [w/m.K]		120	
Melting point range °C		574 ÷ 638	
Tolerance			
Roughness μ		0,4	
Tolerance in thickness +/- 0,10 mm		0,10	
Flatness with thickness ≤5 mm [mm/m]		0,80	
Flatness with thickness 6-12,7 mm [mm/m]		0,40	
Flatness with thickness >12,7 mm [mm/m]		0,13	
Processing characteristics			
Machinability		+++++	
Dimensional stability		+++++	
Erodability		+++	
Weldability		+++++	
Polishability		++++	
Anodizing decorative		++++	
Anodizing hard		++++	
Corrosion resistance (weather)		+++++	
Corrosion resistance (seawather)		++++	

Legend - Processing Characteristics

Excellent +++++

Good ++++

Accettable +++

Mediocre ++

Inadequate +

Not suitable -

CHEMICAL COMPOSITION

DENOMINATION	Si	Fe	Mn	Mg	Cu	Zn	Cr	Ti	Ni	Pb	Bi	V	Others	IMPURITY	ALUMINIUM
5083	0,40	0,40	0,40-1,00	4,00-4,90	0,10	0,25	0,05-0,25	0,15						0,05	0,15 remainder