EN AW 6082

Alloy´s Characteristics	
Alloy	EN AW 6082 [AlSi1MgMn]
Type of Alloy	heat treatable
Temper	T6 /T651
Surface	rolled skin

Mechanical Properties [1]		Typical values
Yield strength $R_{p0,2}$	[MPa]	240 – 260
Ultimate tensile strength R_m	[MPa]	295 – 310
Elongation A_{50}	[%]	7 – 10
Hardness HBW	[2,5/62,5]	89 – 94

Physical Properties [1]		Typical values
Density	[g/cm³]	2,70
Module of elasticity	[GPa]	70
Electrical conductivity	[m/Ω · mm²]	24 – 32
Coefficient of thermal expansion	[$K^{-1} \cdot 10^{-6}$]	23,4
Thermal conductivity	[W/m · K]	170 – 220
Specific heat capacity	[J/kg · K]	896

Processing Characteristics [2]	
Dimensional stability	4 – 5
Machinability	1 – 2
Erodability	1
Weldability (Gas / TIG / MIG / Resistance / EB)	3 / 2 / 1 / 3 / 1
Corrosion resistance (seawater / weather/ stress cracking)	2 / 1 / 1
Use at temperatures (max °C long/short terms) [3]	120 / 160
Anodising (technical / decorative / hard-) [4]	1 / 3 / 1
Polishability	2
Etching	2 – 3
Contact with food (according to EN 602)	yes

Tolerances			
Thickness in [mm]	Flatness [mm] [5]	Thickness [mm]	Width & Length [mm]
3 – 100	EN 485-3	EN 485-3	EN 485-3
Zuschnitte			DIN ISO 2768-1m

Standard Stock Sizes		
Plate Dimension [mm]	1.520 × 3.020	in thickness of 5 – 100 mm
Plate Thickness [mm]	5; 6; 8; 10; 12	
	15; 20; 25; 30; 35; 40	
	50; 60; 70; 80; 100	
Other dimension upon request		

1) Typical values at room temperature.
2) Ratings evaluation rating from 1 (very good) to 6 (inapplicable).
3) Without loss of strength after cooling down.
4) Technical anodising only - no warranty towards optical demands.
5) Surface flatness for whole plates is measured with a special, 1 meter long, digital flatness ruler.