

EN AW 5083

Alloy's Characteristics	
Alloy	EN AW 5083 [AlMg4,5Mn0,7]
Type of Alloy	non heat treatable
Temper	H111
Surface	rolled skin

Mechanical Properties ¹⁾		Typical values
Yield strength R _{p0,2}	[MPa]	115 – 125
Ultimate tensile strength R _m	[MPa]	270 – 275
Elongation A ₅₀	[%]	14 – 16
Hardness HBW	[2,5/62,5]	73 – 75

Physical Properties ¹⁾		Typical values
Density	[g/cm ³]	2.66
Module of elasticity	[GPa]	70
Electrical conductivity	[m/Ω · mm ²]	16 – 19
Coefficient of thermal expansion	[K ⁻¹ · 10 ⁻⁶]	24.2
Thermal conductivity	[W/m · K]	110 – 140
Specific heat capacity	[J/kg · K]	900

Processing Characteristics ²⁾	
Dimensional stability	3 – 4
Machinability	2
Erodability	1
Weldability (Gas / TIG / MIG / Resistance / EB)	4 / 2 / 2 / 2 / 1
Corrosion resistance (seawater / weather/ stress cracking)	1 / 1 / 4
Use at temperatures (max °C long/short terms) ³⁾	120/ 180 under dynamic load:
Anodising (technical / decorative / hard-) ⁴⁾	20/ 90 2
Polishability	1 – 2
Etching	4
Contact with food (according to EN 602)	yes

Tolerances			
Thickness in [mm]	Flatness [mm] ⁵⁾	Thickness [mm]	Width & Length [mm]
4 – 60	EN 485-3	EN 485-3	EN 485-3
cut to size			DIN ISO 2768-1m

Standard Stock Sizes		
Plate Dimension [mm]	1,520 × 3,020	in thickness of 5 – 80 mm
Plate Thickness [mm]	5 ; 6 ; 8 ; 10 ; 12 ; 15	
	20 25 30 35 40 50 60 70 80	
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.

unter dynamischer Belastung: 70/ 90