

G.AL® C250 ELOX PLUS

Alloy's Characteristics	
Alloy	EN AW 5083 [AlMg4,5Mn0,7]
Type of Alloy	non heat treatable
Temper	homogenized and stress relieved, O3
Surface	two surfaces precision milled, roughness R_a 0.4 μm , foiled on both sides

Mechanical Properties ¹⁾		Typical values
Yield strength $R_{p0,2}$	[MPa]	110 – 130
Ultimate tensile strength R_m	[MPa]	230 – 260
Elongation A	[%]	10 – 15
Hardness HBW	[2,5/62,5]	68 – 73

Physical Properties ¹⁾		Typical values
Density	[g/cm ³]	2,66
Module of elasticity	[GPa]	70
Electrical conductivity	[m/ $\Omega \cdot \text{mm}^2$]	16 – 18
Coefficient of thermal expansion	[K ⁻¹ · 10 ⁻⁶]	23,3
Thermal conductivity	[W/m · K]	110 – 130
Specific heat capacity	[J/kg · K]	900

Processing Characteristics ²⁾	
Dimensional stability	1
Machinability	2
Weldability (Gas / TIG / MIG / Resistance / EB)	4 / 2 / 2 / 2 / 1
Corrosion resistance (seawater / weather/ stress cracking)	1 / 1 / 3
Use at temperatures (max °C long/short terms) ³⁾	180 / 280
Anodising (technical / decorative / hard-) ⁴⁾	1 / 2 / 1
Polishability	2 – 3
Etching	4 – 5
Contact with food (according to EN 602)	yes

Tolerances			
Thickness in [mm]	Flatness [mm] ⁵⁾	Thickness [mm]	Width & Length [mm]
5	≤ 0.80	+/- 0,10	-0/+10 & -0/+ 20
6 – 12,7	≤ 0.40	+/- 0,10	-0/+10 & -0/+ 20
>12,7	≤ 0.13	+/- 0,10	-0/+10 & -0/+ 20
Zuschnitte		+/- 0,10	DIN ISO 2768-1m

Standard Stock Sizes	
Plate Dimension [mm]	1.520 × 3.020
Plate Thickness [mm]	10 ; 12 ; 15 ; 20 ; 25 ; 30 ; 40
Other dimension upon request	

Date: 12.07.2016

- 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.

G.AL® is a registered trademark of GLEICH GmbH Metallplatten-Service