

G.AL® C250 ELOX PLUS- precision milled plate

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 Ra 0.4 µm, foiled on both sides

Characteristics:

- ✓ very good anodizing properties
- ✓ highest reproducible properties
- ✓ very fine-grained structure
- ✓ very good polishability
- ✓ very good corrosion resistance
- ✓ extremely low tension level

Applications:

- ✓ Consumer electronics
- ✓ Fixture construction
- ✓ Packaging industry
- ✓ Automation technology
- ✓ Mechanical engineering
- ✓ Model- and mould making

Mechanical Properties ¹		
Yield strength R _{p0.2} [MPa]		110 - 130
Ultimate tensile strength R _m [MPa]		230 - 295
Elongation A ₅₀ [%]		10 - 15
Hardness HBW		68 - 75

Physical Properties ¹		
Density [g/cm ³]		2,66
Module of elasticity [GPa]		70
Electrical conductivity [M/Ωmm ²]		16 - 18
Coeffic. 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
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	180 / 280
Anodising (technical / decorative / hard-) ⁴	1 / 2 / 1
Polishability	2 - 3
Etching	4 - 5
Contact with food (according to EN 602)	yes

Mechanical Properties ¹			
Thickness in[mm]	Flatness [mm/m]	Thickness [mm]	Length & width [mm]
5	≤ 0,80	+/- 0,10	-0/+20 / -0/+10
6 - 12,7	≤ 0,40	+/- 0,10	-0/+20 / -0/+10
> 12,7	≤ 0,13	+/- 0,10	-0/+20 / -0/+10
Cuttings			DIN 2769:2023-04

Standard Stock Sizes		
Plate Dimension [mm]	1520 x 3.020	in thickness of 10 - 40 mm
Plate Thickness [mm]	10; 12; 15; 20; 25; 30; 40	

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

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