

## 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

### Mechanical Properties <sup>1)</sup>

Yield strength R <sub>p0,2</sub>	[MPa]	110 – 130
Ultimate tensile strength R <sub>m</sub>	[MPa]	230 – 295
Elongation A <sub>50</sub>	[%]	10 – 15
Hardness HBW		68 – 75

### Physical Properties <sup>1)</sup>

Density	[g/cm <sup>3</sup> ]	2,66
Module of elasticity	[GPa]	70
Electrical conductivity	[M/Ω·mm <sup>2</sup> ]	16 – 18
Coeffic. of thermal expansion	[K <sup>-1</sup> ·10 <sup>-6</sup> ]	23,3
Thermal conductivity	[W/m·K]	110 – 130
Specific heat capacity	[J/kg·K]	900

### Processing Characteristics <sup>2)</sup>

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) <sup>3)</sup>	180 / 280
Anodising (technical / decorative / hard-) <sup>4)</sup>	1 / 2 / 1
Polishability	2 – 3
Etching	4 – 5
Contact with food (according to EN 602)	yes

### Tolerances

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]	1.520 x 3.020	in thickness of 10 – 40 mm
Plate Thickness [mm]	10; 12; 15; 20; 25; 30; 40	
Other dimension upon request		

### 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

Date: 18.10.2023

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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