



- › excellent anodizing
- › highest reproducibility
- › very fine-grained structure
- › very good polishing
- › two surfaces precision milled
- › excellent flatness
- › stress relieved
- › elevated strength
- › very homogeneous

SPECIFIC NOTES

- › broad spectra e.g. in electronics, laser, packaging and optical industry and the medical and laboratory technology
- › displays and front frames
- › pressure plates
- › laser modules
- › all kinds of base and table plates
- › cover plates
- › holder of microscopes and telescopes

APPLICATIONS

COLOURS OF ALUMINIUM

G.AL® C250 ELOX^{PLUS} – FOR OPTIMAL ANODIZING QUALITY

The requirements of technical and visual anodizing increased steadily over the recent years. By offering excellent properties for anodizing and hard anodizing, as well as the reliable G.AL® C250 quality, G.AL® C250 ELOX^{PLUS} is an ideal solution and will help you to stay competitive and to satisfy your customers.

GENERAL INFORMATION

Alloy	EN AW	5083
	chem. symbol	AlMg4.5Mn0.7
	Type	not heat treatable
Temper		homogenized / stress relieved, O3
Surface	Texture	two surfaces precision milled / foiled on both sides
	Roughness R _a	0.4 μm

MECHANICAL PROPERTIES¹⁾

Yield strength R _{p0,2}	[MPa]	110-130
Ultimate strength R _m	[MPa]	230-260
Elongation A	[%]	10-15
Hardness HBW	[2.5/62.5]	68-73

PHYSICAL PROPERTIES¹⁾

Density	[g/cm ³]	2,66
Module of elasticity	[GPa]	70
Electrical conductivity	[m/Ω · 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 CHARACTERISTICS²⁾

Form stability		1
Machining		2
Welding (Gas / TIG / MIG / resistance / EB)		4/2/2/2/1
Corrosion resistance (seawater / weather / stress cracking ³⁾)		1/1/3
Use at temperature ⁴⁾ (max. °C long / short term)		180/280
Anodizing ⁵⁾ (technical / decorative / hard)		2/2/2
Polishing		2-3
Etching		4-5
Contact with food (DIN EN 602)		yes

TOLERANCES

Thickness	[mm]	+/- 0.10
Flatness	[mm/m ⁶⁾]	plates 5mm = 0.80 mm plates 6-12.7 mm = 0.40 mm plates >12.7 mm = 0.13 mm
Plate dimension	[mm]	-0/+10 -0/+20
Sawing in length / width	[mm]	acc. DIN ISO 2768-1m
Plate dimension	[mm]	1,540 x 3,048 / 1,540 x 3,670

STANDARD STOCK SIZES

Plate Thickness	[mm]	10 12 15 20 25 30 40
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Development has been made in co-operation with BWB Nehlsen, one of the leading German anodizing experts.

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