

G.AL® C250 – 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 precise surface
- ✓ very uniform flatness
- ✓ extremely low residual stress
- ✓ very good corrosion resistance
- ✓ very good dimensional stability

Applications:

- ✓ Jig-making
- ✓ 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 ₃₀ [%] | | 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 | 2 / 4 / 2 |
| 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] | 1520 x 3.020 | in thickness of 12 - 40 mm |
| | 1590 x 3.670 | |
| | 2.160 x 4.000 | in thickness of 10 - 60 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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