

G.AL® C250 ELOX PLUS – precision milled plate

| Plate's Characteristics | |
|-------------------------|---|
| Alloy: | EN AW/AA 5083 |
| Type of Alloy: | non-heat-treatable |
| Temper: | homogenized and stress relieved, O3 |
| Surface: | precision milled, roughness R_a 0,4 μm , PVC on both sides |

| Mechanical Properties ¹⁾ | | |
|-------------------------------------|------------|---------|
| Yield strength $R_{p0,2}$ | [ksi] | 16 – 19 |
| Ultimate tensile strength R_m | [ksi] | 33 – 42 |
| Elongation A | [%] | 10 – 15 |
| Hardness HBW | [2.5/62.5] | 68 – 73 |

| Physical Properties ¹⁾ | | |
|-----------------------------------|--------------------------|---------|
| Density | [lbs/cu in.] | 0.096 |
| Module of elasticity | [ksi · 10 ⁹] | 10.2 |
| Electrical conductivity | [% IACS] | 29 - 32 |
| Coefficient of therm. Expans. | [10-6/ °F] | 13.1 |
| Thermal conductivity | [BTU/ft hr °F] | 64 – 75 |
| Specific heat capacity | [BTU/ lb°F] | 0.214 |

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
- ✓ Optical industry
- ✓ Packaging industry
- ✓ Mechanical engineering and automation technology
- ✓ Medical and laboratory technology
- ✓ Printing industry

| Processing Characteristics ²⁾ | |
|--|------------------|
| Dimensional stability | Excellent |
| Machinability | Very good |
| Erodability | Excellent |
| Weldability (Gas / TIG / MIG / Resistance / EB) | Good – Very good |
| Corrosion resistance (seawater / weather) | Excellent |
| Use at temperatures (max°F / long / short terms) ²⁾ | 356 / 536 |
| Anodizing ³⁾ | Excellent |
| Polishability | Good |
| Etching | Poor |
| Contact with food (according to EN 602) | Yes |

| Tolerances | | | |
|-------------------|-----------------------------|----------------|---------------------|
| Thickness in [in] | Flatness [in] ⁴⁾ | Thickness [in] | Width & Length [in] |
| < 0.500 | ≤ 0.015 | +/- 0.004 | -0 / + 0.790 |
| > 0.500 | ≤ 0.005 | +/- 0.004 | -0 / + 0.790 |
| Cuts | | | DIN ISO 2768-1m |

| Standard Stock Sizes | |
|------------------------------|----------------------|
| Plate Dimension [in] | Plate Thickness [in] |
| 48.5 × 144.5 | 0.250 – 5.000 |
| 62.5 × 144.5 | 0.250 – 5.000 |
| 85.0 × 157.5 | 0.375 – 4.000 |
| Other dimension upon request | |

Date: October 27, 2023

1) Typical values at room temperature.

2) Without loss of strength after cooling down.

3) Technical anodizing only - no warranty towards optical demands

4) Surface flatness for whole plates is measured with a special, 1 meter long, digital flatness ruler

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