

# G.AL® C330 – precision milled plate

| Plate's Characteristics |  |
|-------------------------|--|
| Alloy:                  | EN AW/AA 7021  |
| Type of Alloy:          | heat-treatable   |
| Temper:                 | Hardened, T79  |
| Surface:                | precision milled, roughness R <sub>a</sub> 0,4 µm, PVC on both sides |

| Mechanical Properties <sup>1)</sup>      |            |           |
|--|------------|-----------|
| Yield strength R <sub>p0,2</sub>         | [ksi]      | 42 – 49   |
| Ultimate tensile strength R <sub>m</sub> | [ksi]      | 46 – 55   |
| Elongation A                             | [%]        | 2.5 – 4.5 |
| Hardness HBW                             | [2.5/62.5] | 110 – 120 |

| Physical Properties <sup>1)</sup> |                          |         |
|-----------------------------------|--------------------------|---------|
| Density                           | [lbs/cu in.]             | 0.101   |
| Module of elasticity              | [ksi · 10 <sup>9</sup> ] | 10.2    |
| Electrical conductivity           | [% IACS]                 | 38 - 43 |
| Coefficient of therm. Expans.     | [10-6/ °F]               | 13      |
| Thermal conductivity              | [BTU/ft hr °F]           | 72 - 90 |
| Specific heat capacity            | [BTU/ lb°F]              | 0.208   |

## Characteristics:

- ✓ Very high strength
- ✓ Excellent form stability
- ✓ Very good machinability
- ✓ Extremely stress relieved
- ✓ Very uniform flatness
- ✓ Precision milled surface

## Applications:

- ✓ Toolmaking
- ✓ Installation technology
- ✓ Printing industry
- ✓ Automation technology
- ✓ Handling and robotic technology
- ✓ Mechanical and special machine engineering

| Processing Characteristics <sup>2)</sup>                       |                  |
|--|------------------|
| Dimensional stability  | Very good        |
| Machinability  | Very good        |
| Erodability  | Excellent        |
| Weldability (Gas / TIG / MIG / Resistance / EB)                | Good – Very good |
| Corrosion resistance (seawater / weather)                      | Satisfactory     |
| Use at temperatures (max°F / long / short terms) <sup>2)</sup> | 356 / 536        |
| Anodizing <sup>3)</sup>  | Satisfactory     |
| Polishability  | Good – Very good |
| Etching  | Good             |
| Contact with food (according to EN 602)                        | No               |

| Tolerances     |                             |                |                     |
|----------------|-----------------------------|----------------|---------------------|
| Thickness [in] | Flatness [in] <sup>4)</sup> | Thickness [in] | Width & Length [in] |
| < 0.625        | ≤ 0.015                     | +/- 0.004      | -0 / + 0.790        |
| > 0.625        | ≤ 0.010                     | +/- 0.004      | -0 / + 0.790        |
| Cuts           |                             |                | DIN ISO 2768-1m     |

| Standard Stock Sizes         |                      |
|------------------------------|----------------------|
| Plate Dimension [in]         | Plate Thickness [in] |
| 60.5 x 120.0                 | 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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