

## ALPLAN® 7075 – high-strength precision rolled plate

### Alloy's Characteristics

|                |  |
|----------------|--|
| Alloy:         | 7075 [AlZn5,5MgCu]   |
| Type of Alloy: | heat treatable   |
| Temper:        | T651   |
| Surface:       | two surfaces precision milled, roughness $R_a$ 0.4 $\mu\text{m}$ , foiled <input type="checkbox"/> |

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

|                                 |       |           |
|---------------------------------|-------|-----------|
| Yield strength $R_{p0,2}$       | [MPa] | 460 – 500 |
| Ultimate tensile strength $R_m$ | [MPa] | 530 – 565 |
| Elongation $A_{50}$             | [%]   | 5 – 10    |

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

|                               |                                      |           |
|-------------------------------|--------------------------------------|-----------|
| Density                       | [g/cm <sup>3</sup> ]                 | 2,81      |
| Module of elasticity          | [GPa]                                | 72        |
| Electrical conductivity       | [J/kg·K]                             | 862       |
| Coeffic. of thermal expansion | [K <sup>-1</sup> ·10 <sup>-6</sup> ] | 23,6      |
| Thermal conductivity          | [W/m·K]                              | 115 – 140 |
| Specific heat capacity        | [M/Ω·mm <sup>2</sup> ]               | 17 – 21   |

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

|   |                   |
|---|-------------------|
| Dimensional stability                                       | 5 - 6             |
| Machinability   | 1                 |
| Erodability   | 1                 |
| Weldability (Gas / TIG / MIG / Resistance / EB)             | 6 / 6 / 6 / 2 / 5 |
| Corrosion resistance (seawater / weather/ stress cracking)  | 5 / 5 / 3         |
| Use at temperatures (max °C long/short terms) <sup>3)</sup> | 90 / 120          |
| Anodising (technical / decorative / hard-) <sup>4)</sup>    | 4 / 6 / 2         |
| Polishability   | 1                 |
| Etching   | 1                 |
| Contact with food (according to EN 602)                     | nein              |

### Tolerances

| Thickness in[mm] | Flatness [mm/m] | Thickness [mm] | Length & width [mm] |
|------------------|-----------------|----------------|---------------------|
| ≤ 15             | ≤ 0,75          | +/- 0,10       | -0/+2 / -0/+3       |
| > 15             | ≤ 0,50          | +/- 0,10       | -0/+2 / -0/+3       |
| Zuschnitte       |                 |                | DIN ISO 2768-1m     |

### Standard Stock Sizes

|                              |                        |                            |
|------------------------------|------------------------|----------------------------|
| Plate Dimension [mm]         | 1.520 x 3.020          | in thickness of 12 – 40 mm |
| Plate Thickness [mm]         | 12, 15, 20, 25, 30, 40 |                            |
| Other dimension upon request |                        |                            |

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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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### Characteristics:

- ✓ very high strength
- ✓ narrow tolerances of thickness and flatness
- ✓ very good machinability

### Applications:

- ✓ Toolmaking
- ✓ device constructions and mechanical engineering
- ✓ packaging and printing industry
- ✓ Automation technology