

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 μm , foiled <input type="checkbox"/>

Mechanical Properties ¹⁾

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

Physical Properties ¹⁾

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

Characteristics:

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

Applications:

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

Processing Characteristics ²⁾

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) ³⁾	90 / 120
Anodising (technical / decorative / hard-) ⁴⁾	4 / 6 / 2
Polishability	1
Etching	1
Contact with food (according to EN 602)	no

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		

Date: 18.10.2023

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

ALPLAN® is a registered trademark of CONSTELLIUM Valais SA