CERTAL®

Alloy's charcteristics	
Alloy:	EN AW-7022 [[AlZn5Mg3Cu]
Type of Alloy:	heat treatable
Temper:	T651
Surface:	rolled skin

Mechanical Properties 1)		
Yield strength $R_{p0,2}$	[MPa]	400 – 495
Ultimate tensile strength R_m	[MPa]	490 – 555
Elongation A_{50}	[%]	6 – 9
Hardness HBW		165 - 170

Physical Properties 1)		
Density	[g/cm³]	2,76
Module of elasticity	[GPa]	72
Electrical conductivity	[M/Ω·mm²]	18 – 22
Coeffic. of thermal expansion	[$K^{-1} \cdot 10^{-6}$]	23,6
Thermal conductivity	[W/m·K]	120 – 150
Specific heat capacity	[J/kg ·K]	862

Characteristics:

- ✓ very good machinability
- ✓ very high strength
- ✓ very good polishability
- ✓ good dimensional stability
- ✓ good protective anodising capability

Applications:

- ✓ Toolmaking
- ✓ Drive technology
- ✓ Handling machines and industrial robots
- ✓ Device construction and mechanical engineering

Processing Characteristics 2)	
Dimensional stability	2 - 3
Machinability	1
Erodability	1
Weldability (Gas / TIG / MIG / Resistance / EB)	6 / 6 / 6 / 2 / 3
Corrosion resistance (seawater / weather/ stress cracking)	5 / 5 / 4
Use at temperatures (max °C long/short terms) 3)	90 / 120
Anodising (technical / decorative / hard-) 4)	3 / 6 / 2
Polishability	1
Etching	1 – 2
Contact with food (according to EN 602)	no

Tolerances			
Thickness in[mm]	Flatness [mm/m]	Thickness [mm]	Length & width [mm]
< 150	DIN EN 485-3	- DIN EN 485-3	-0/+20 / -0/+10
Cuttings > 150 mm			DIN 2769:2023-04

Standard Stock Sizes		
Plate Dimension [mm]	1.520 x 3.020	in thickness of 8 – 100 mm
	1.400 × 3.020	in thickness of 110 mm
	1.200 × 3.020	in thickness of 120 mm
	1.020 × 3.020	in thickness of 130 mm
	950 × 3.020	in thickness of 140 mm
Plate Thickness [mm]	8; 10; 12; 15; 20; 25; 30; 35	
	40; 45; 50; 60; 70; 80; 90; 100; 110; 120; 130; 140	
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