

G.AL® C330 – DYNAMIC

Alloy's characteristics

Alloy:	EN AW-7021 [AlZn5,5Mg1,5]
Type of Alloy:	heat treatable
Temper:	T79
Surface:	Six-sides sawn, roughness Ra < 15 µm

Mechanical Properties ¹⁾

Yield strength R _{p0,2}	[MPa]	290 – 330
Ultimate tensile strength R _m	[MPa]	350 – 370
Elongation A ₅₀	[%]	5 – 8
Hardness HBW	[2,5/62,5]	110 – 115

Physical Properties ¹⁾

Density	[g/cm ³]	2,8
Module of elasticity	[GPa]	70
Electrical conductivity	[M/Ω · mm ²]	21 – 24
Coeffic. of thermal expansion	[K ⁻¹ · 10 ⁻⁶]	23,0
Thermal conductivity	[W/m · K]	125 – 155
Specific heat capacity	[J/kg · K]	875

Processing Characteristics ²⁾

Dimensional stability	1 – 2
Machinability	1 – 2
Erodability	1
Weldability (Gas / TIG / MIG / Resistance / EB)	6 / 5 / 2 / 6 / 1
Corrosion resistance (seawater / weather/ stress cracking)	4 / 3 / 4
Use at temperatures (max °C long/short terms) ³⁾	120 / 140
Anodising (technical / decorative / hard-) ⁴⁾	3 / 6 / 2
Polishability	1
Etching	2
Contact with food (according to EN 602)	no

Tolerances

Thickness in [mm]	Flatness [mm/m]	Dicke [mm]	Length & width [mm]
≤ 150	≤ 0,40	-0/+2,5	DIN ISO 2768-1m
> 150	≤ 0,25	-0/+5	-0/+5

Characteristics:

- ✓ Free of microporosity, diffusion resistance
- ✓ very high strength and hardness
- ✓ very good elongation properties
- ✓ very good machinability
- ✓ excellent damping characteristics
- ✓ first rate polishability
- ✓ ideally suited for applications under dynamic loads

Applications:

- ✓ Hydraulics
- ✓ Mould-making
- ✓ Drive technology
- ✓ Mechanical engineering and special machine engineering

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

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