

cast mold plates G.AL® C330R

Plate's Characteristics	
Alloy	EN /AW 7021 (special type)
Type of Alloy	heat treatable
Temper	hardened T79
Surface	6-sides sawed, roughnes $R_a < 15\mu\text{m}$

Mechanical Properties ¹⁾		Typical values
Yield strength $R_{p0,2}$	[ksi]	42 – 49
Ultimate tensile strength R_m	[ksi]	46 – 55
Elongation A_5	[%]	2.5 – 4.5
Hardness HBW	[2.5/62.5]	110 – 120

Physical Properties ¹⁾		Typical values
Density	[lbs/cu in.]	0.101
Module of elasticity	[ksi·10 ³]	10.2
Electrical conductivity	[% IACS]	38 – 43
Coefficient of thermal expansion	[10 ⁻⁶ /°F]	13
Thermal conductivity	[BTU in/ft ² hr°F]	865 – 1070
Specific heat capacity	[BTU/lb°F]	0.208

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°F / long / short / terms) ³⁾	248 / 284
Anodising (technical / decorative / hard-) ⁴⁾	3 / 6 / 2
Polishability	1 – 2
Etching	2 – 3
Contact with food (according to EN 602)	no

Tolerances			
Thickness in [in]	Flatness [in] ⁵⁾	Thickness [in]	Width & Length [in]
≤ 5.90	not specified	-0/ +0.1	-0 / + 0.375 / -0 / +0.79
> 5.90	not specified	-0/ +0.2	-0 / + 0.375 / -0 / +0.79
cuts < 5.9	-	-	DIN ISO 2768-1m
cuts > 5.9	-	-	-0/ + 0.2

Standard Stock Sizes	
Plate Dimension [in]	60.5 × 120.0
Plate Thickness [in]	0.39 to 22.40
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.
- 5) Surface flatness for whole plates is measured with a special, 1 meter long, digital flatness ruler.

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