

mold plates G.AL® C210R

Plate's Characteristics	
Alloy	EN / AA 5083 (special type)
Type of Alloy	non heat treatable
Temper	homogenized and stress relieved, O3
Surface	all sides sawed, roughness R _a 15 μm

Mechanical Properties ¹⁾		Typical values
Yield strength R _{p0,2}	[ksi]	16 – 19
Ultimate tensile strength R _m	[ksi]	33 – 42
Elongation A ₅	[%]	10 – 15
Hardness HBW	[2.5/62.5]	68 – 75

Physical Properties ¹⁾		Typical values
Density	[lbs/cu in.]	0.096
Module of elasticity	[ksi·10 ³]	10.2
Electrical conductivity	[% IACS]	29 – 32
Coefficient of thermal expansion	[10 ⁻⁶ /°F]	13.1
Thermal conductivity	[BTU in/ft ² hr°F]	760 – 900
Specific heat capacity	[BTU/lb°F]	0.214

Processing Characteristics ²⁾	
Dimensional stability	1
Machinability	2
Erodability	1
Weldability (Gas / TIG / MIG / Resistance / EB)	4 / 2 / 2 / 2 / 1
Corrosion resistance (seawater / weather/ stress cracking)	1 / 1 / 4
Use at temperatures (max°F / long / short / terms) ³⁾	356 / 536
Anodising (technical / decorative / hard-) ⁴⁾	2 / 4 / 2
Polishability	2 – 3
Etching	4 – 5
Contact with food (according to EN 602)	yes

Tolerances			
Thickness in [in]	Flatness [in] ⁵⁾	Thickness [in]	Width & Length [in]
≤ 5.90	not specified	0.1	-0 / + 0.375 / -0 / +0.79
> 5.90	not specified	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 [mm]	48.5 × 144.5	in thickness of 0.394 – 22.440[in] mm
	59.8 × 118.9	in thickness of 0.394 – 22.440[in] mm
	61.8 × 144.5	in thickness of 0.394 – 31.496[in] mm
Plate Thickness [mm]	0.197 – 4.000 in	
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	.	

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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